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National Hospital Rate-Setting Study, Vol. VI

Case Study of Prospective Reimbursement in New Jersey

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Health Care Financing Grants and Contracts Report

Case Study of Prospective Reimbursement in New Jersey

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Craig Coelen, Project Director
Marilyn Falik, HCFA Project Officer
Authors: Nancy Worthington
Jerry Cromwell
Gilbey Kamens
James Kanak

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Office of Research, Demonstrations,
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April 1980

NEW JERSEY

Prospective reimbursement in New Jersey began in 1969 as a voluntary program under the auspices of the New Jersey Hospital Association but was converted in 1974 into a mandatory program under the administration of the Department of Health. When the current rate-setting program was deliberately placed in the Department of Health, an effort was made to maximize coordination between rate setting and other departmental functions--health plan development and Certificate of Need. Budget reviews and negotiation with hospitals are conducted by agency staff. Appeals are directed to an administrative hearing officer in the Department of Health and ultimately may go to the New Jersey court system.

Proposed rate increases in New Jersey may be subjected to two levels of review. All proposed rate increases are compared to a global threshold; only those increases that fail the global test are subject to further review. Detailed review is based extensively on interhospital comparisons of cost per unit of service for groups of departments and individual departments. Unit cost above the median for a hospital's peer group by more than an established percentage (10 to 15 percent, depending on the department) are automatically challenged. When all challenged costs have been deducted from base-year expenditures the new total is divided by an adjusted value for volume of service in the base year. Volume adjustments are made for each department, to account for differences between actual and projected volume in the base year. Adjustments depend in part on the percentage of the department's cost which is assumed to be variable rather than fixed cost. Volume-adjusted costs for the base year are finally adjusted upward for inflation in the price of hospital inputs. The resulting per diem rate is used as a preliminary payment rate and the basis for negotiation with the hospital.

Enforcement in the New Jersey program takes two forms. First, the rates approved by the program are used to reimburse hospitals by Blue Cross and Medicaid, the two payors covered by the system. Since revenue from covered payors cannot exceed established rates, enforcement is automatic. Second, spending in excess of approved levels in the base year is deducted from the approved budget in the next year. As a result of this second mechanism, hospitals that chronically spend above approved levels may find their actual reimbursement rates declining over time despite the rising price of labor, capital and supplies.

ACKNOWLEDGMENTS

The authors would like to acknowledge that information for this case study was provided through personal and telephone interviews, correspondence and secondary data supplied by many people. A list of these people is included in Appendix B of this report.

The authors would like to especially acknowledge Joseph I. Morris, Coordinator, SHARE System, and the members of his staff for the generous amount of time and effort they contributed to our knowledge.

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Also, the authors express sincere appreciation to HCFA staff for their technical assistance, especially to prior project officers, Fred Hellinger, Ruth Lis, Arne Anderson, and Bruce Steinhardt.

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FOREWORD

The following case study report of prospective reimbursement in New Jersey has been written as part of the National Hospital Rate-Setting Study. This study is being conducted for the Office of Research, Demonstrations, and Statistics of the Health Care Financing Administration, U.S. Department of Health, Education, and Welfare, by Abt Associates Inc., Policy Analysis, Inc., and Health Economics Research, Inc.* The overall goal of the three-year study is to determine the impact of rate setting on hospital costs, quality of hospital care, and access to health care by the elderly and the economically disadvantaged. In addition, the study will examine the impact of prospective reimbursement on other areas of hospital performance, including revenues, volume and composition of services, productivity, wages, case mix, and administrative behavior. Because the effects of prospective reimbursement may be felt beyond the hospital sector, the study will also examine impacts on the costs and utilization of the health care system as a whole.

This volume is one of nine case study reports (Arizona, Connecticut, Maryland, Massachusetts, Minnesota, New Jersey, New York, Washington, and Western Pennsylvania). Each report examines in detail the adoption, implementation, review processes and legal challenges of each prospective reimbursement system. In addition, the reports examine linkages and interactions that take place between rate-setting agencies and other organizations such as planning groups, hospital associations, third party payors, and unions. Each case study also presents a preliminary analysis of the potential rigor and equity of the prospective reimbursement system. (A separate report, A Comparative Analysis of Nine Prospective Reimbursement Programs, analyzes all nine programs simultaneously along these factors.) The case study reports will be most useful to those interested in a detailed description of the prospective reimbursement programs in the nine states under study.

The preliminary analyses of rigor and equity in the case studies are interim in nature. Data collection on hospital performance is still ongoing and will yield important information about the effectiveness of administrative structures and procedures in containing costs and delivering quality service. Final results of the study are expected in 1982.

Diane E. Hamilton
Deputy Project Director &
Director of Case Studies
National Hospital
Rate-Setting Study

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*Arthur D. Little, Inc. and Arthur Andersen & Co. are also participating in the National Hospital Rate-Setting Study but were not involved in the case studies.

INTRODUCTION

A Brief Overview of the System

Hospital rate setting has existed in some form in New Jersey for a decade. For the first five years, rate setting was under the jurisdiction of the state Commissioner of Insurance, who had initiated retrospective cost review of high cost hospitals in the late 1960s in response to the precipitous rise in Blue Cross premiums. The New Jersey Hospital Association (NJHA) proposed that the process be changed to a prospective budget review system, with per diem rates to be recommended in advance of the budget year. The Association's proposal was adopted by the Commissioner of Insurance in 1968, and a budget review system was developed and subsequently administered by the Hospital Research and Education Trust (HRET), an arm of the NJHA.

This voluntary budget review system continued in operation until 1974, despite passage three years earlier of the Health Care Facilities Planning Act, which gave the authority to set hospital rates to the Department of Health. Among other factors, the election of a new governor in 1974 ended rate setting within the HRET; the administrative locus was then abruptly changed to the Department of Health, where it has remained since.

The current system, known as SHARE (Standard Hospital Accounting and Rate Evaluation), has been in operation since 1976. The system has continued to be based on prospective budget review, but the process is now mandatory for all 118 short-term general and special hospitals. Moreover, methods used to report and review budget data have changed substantially. Budget review has become more rigorous with the use of standardized screens for reviewing costs departmentally. Rates are still set on a per diem basis, but only for Blue Cross and Medicaid. Payments by other payors are unregulated by the SHARE system, but that is scheduled to change in 1979.

Comparative Trends in New Jersey Hospitals

This section focuses on several salient characteristics of the hospital industry in New Jersey (1969-1977), including:

- total number of beds;
- total revenue per adjusted patient day;
- total expense per adjusted patient day;
- total expense per capita;

- total assets per community hospital bed;
- average number of patient days;
- average length of stay; and
- average percentage occupancy.

Figures 1 and 2 illustrate trends over time for pertinent variables in the state and compare them to patterns of national hospital industry growth. As can be seen in the figures, upward trends in the utilization and cost of hospitals' services are quite pronounced in New Jersey and in the nation. Capacity (beds) and volume of service (patient days) rose in both the state and the nation, but the increases have been relatively modest--15 to 25 percent over an eight-year period. Expense per day, revenue per day, and expense per capita rose by 250 to 350 percent over the same period. The enormous increase in total spending for hospital care is due primarily to increases in price. The focus of prospective reimbursement on the control of hospital inflation, therefore, is clearly appropriate.

There are several notable differences between trends in the hospital industry in New Jersey and corresponding trends for the nation. Capacity and volume of service increased at a slightly faster rate in New Jersey than in other states, while expense per day and revenue per day increased at a slightly slower rate in New Jersey than in the nation. Hospitals in New Jersey maintained a stable occupancy rate betwen 1969 and 1977, whereas the occupancy rate for the nation fell during the same period by more than five percentage points. Average length of stay has changed very little, remaining one day per admission higher in New Jersey than in the nation.

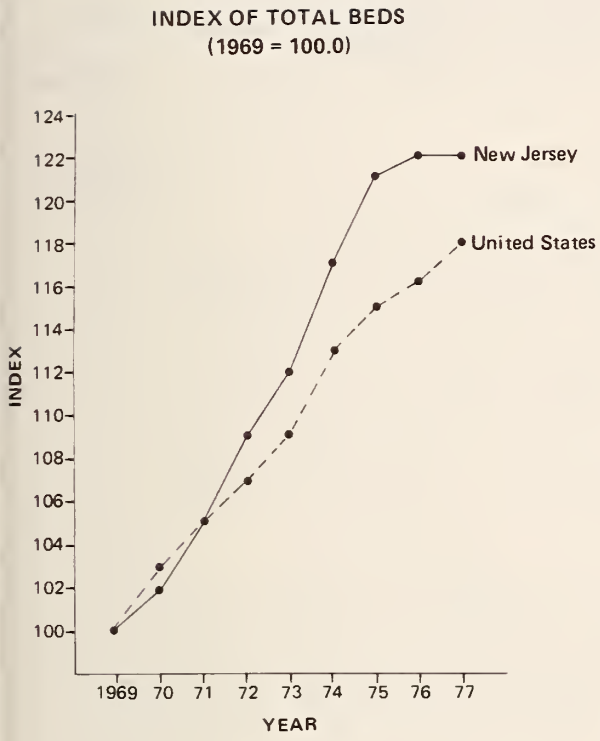
It would be rash to attribute the differences in utilization and cost between New Jersey and the nation to the existence of a prospective rate-setting program in New Jersey. There are many other factors that may be responsible for the differential trends--differences in the composition of the industry, in the regional cost of labor and supplies, in the mix of patients, in state insurance coverage for hospitalization, and in the impact of other governmental regulation of hospitals (e.g., utilization review, Certificate of Need). These other factors must be controlled for statistically before the effects of rate setting can be determined in isolation.

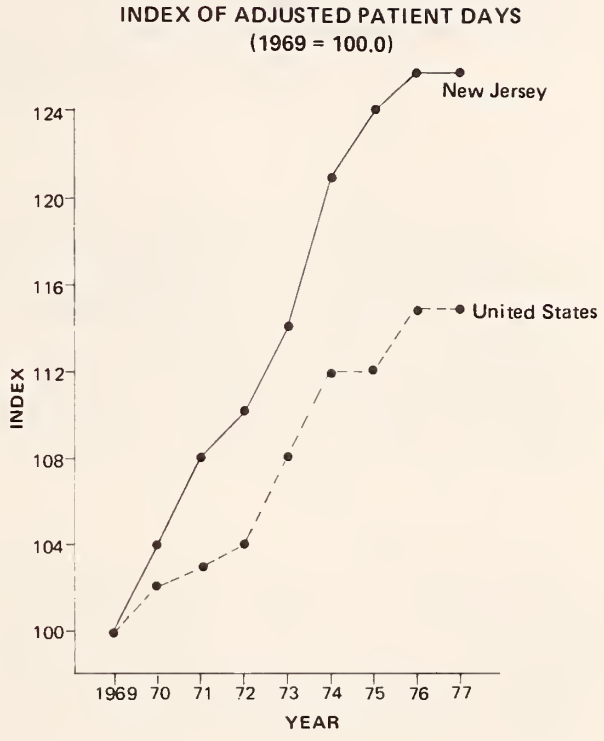
Overview of this Study

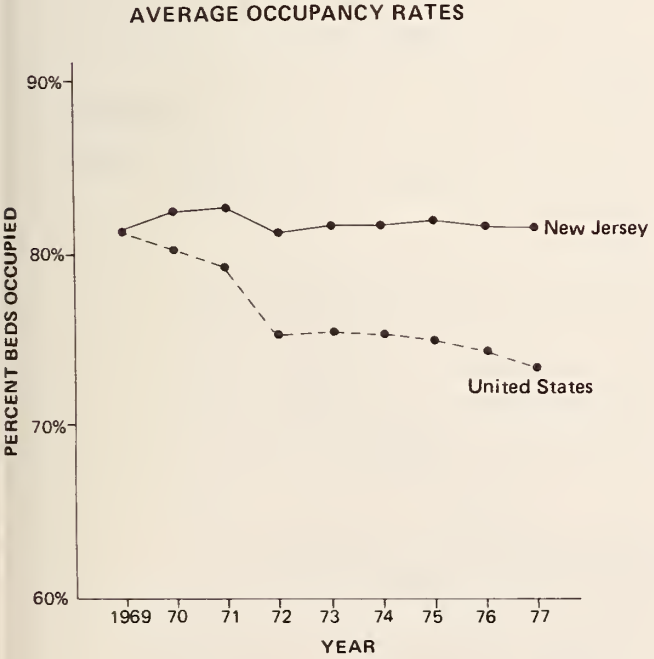
The remaining sections of this report describe in detail the history and the mechanics of hospital rate setting in New Jersey and briefly describe future prospects. The next section presents a chronology of events leading up to the adoption of rate setting in its current form.

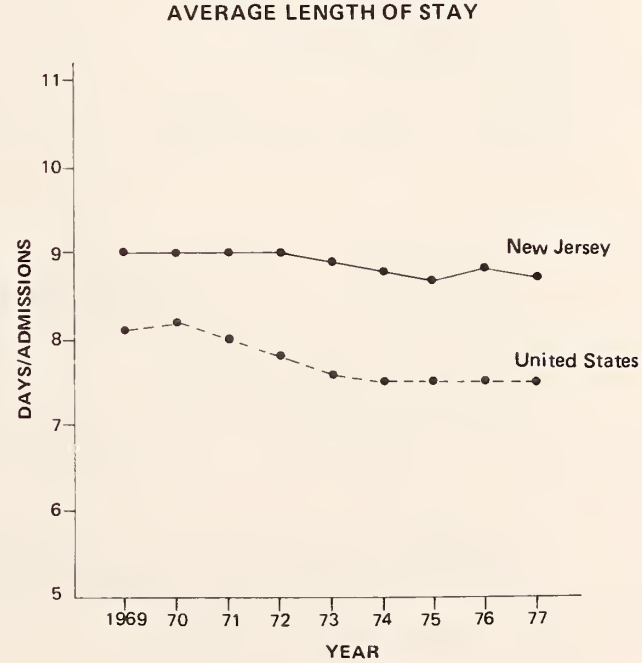
Figure 1

COMPARISON OF HOSPITAL INDICATORS:
Capacity, Volume of Service and Utilization
for Community Hospitals, 1969-1977
NEW JERSEY vs. U.S.







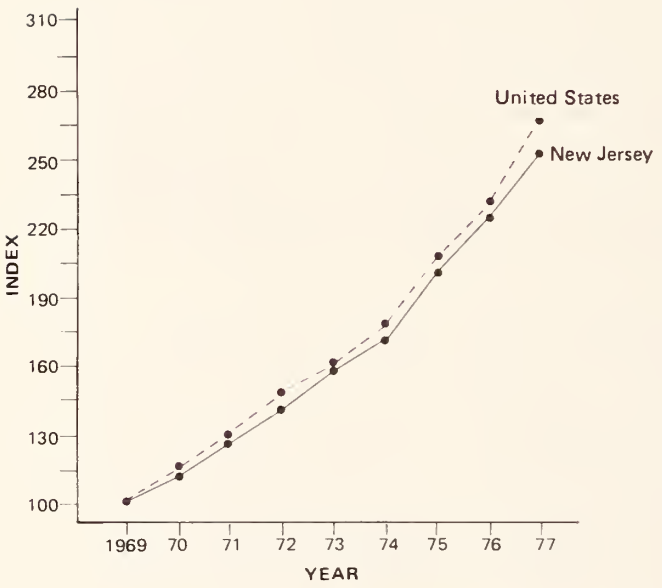


Sources: U.S. Bureau of the Census
American Hospital Association, *Hospital Statistics*

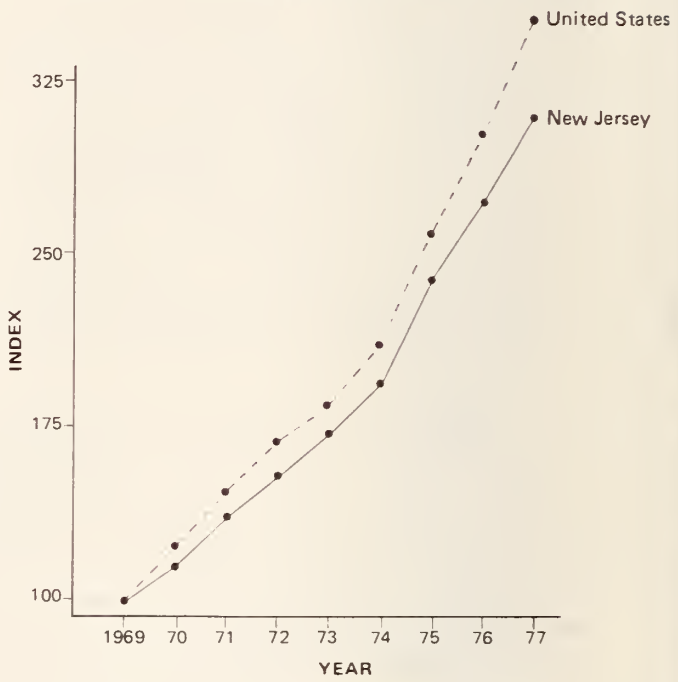
Figure 2

COMPARISON OF HOSPITAL INDICATORS:
Expense, Total Revenue and Assets
for Community Hospitals, 1969-1977
NEW JERSEY vs. U.S.

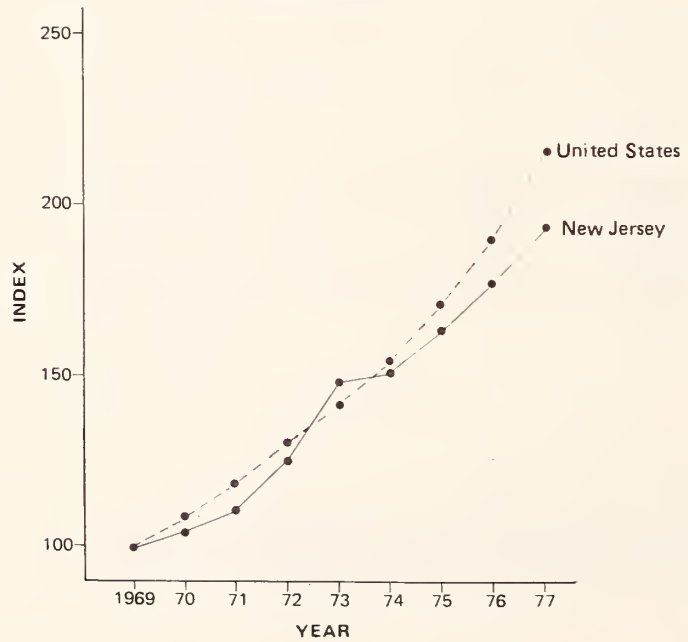
INDEX OF HOSPITAL EXPENSE PER DIEM*
(1969 = 100.0)



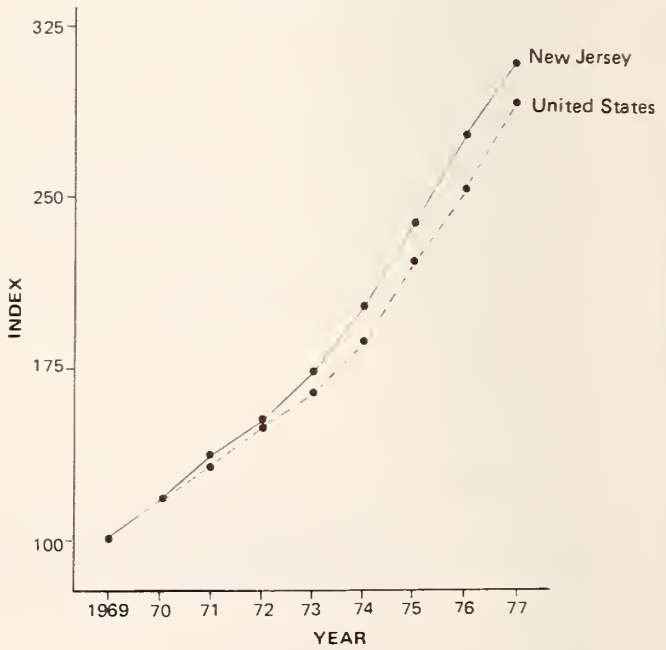
INDEX OF TOTAL HOSPITAL REVENUE PER DIEM*
(1969 = 100.0)



INDEX OF ASSETS PER BED
(1969 = 100.0)



INDEX OF HOSPITAL EXPENSE PER CAPITA
(1969 = 100.0)



*Per adjusted patient day.

Sources: U.S. Bureau of the Census
American Hospital Association, *Hospital Statistics*

The third section describes the mechanics of the budget review and rate-setting process, from the submission of the budget documents to the hearing of rate appeals by the courts, and discusses new legislation that is expected to lead to major changes in the current system and the developmental work already in progress. The fourth section describes the impact of the system on the various payor groups and the interactions between the rate setters and other key agencies and organizations. The final section discusses the rigor, incentives, and equity of the program, given what is known so far about its structure, process, and outcomes.

ADOPTION

Concern over hospital costs has existed at the state level in New Jersey since the late 1950s and was primarily focused on the rate of increase in Blue Cross premiums, for which approval by the Commissioner of Insurance was required. Following a series of premium increases in the late 1950s and early 1960s, and amid projections that further increases in hospital costs would perpetuate the pattern, the Commissioner of Insurance imposed a ceiling in 1963 on the reimbursement rates Blue Cross could pay hospitals. Special review would be required for those hospitals with *per diem* rates above the ceiling.

Initially, the ceiling was flexible and was geared toward screening out the most expensive ten percent of hospitals for special review. Later, the ceiling was frozen at a fixed amount per day so that gradually more and more hospitals fell outside the acceptable range. However, since the Commissioner set interim payment rates no higher than the ceiling, it was not until final, audited cost reports became available that final rates could be set with special cost reviews performed for high-cost hospitals. The retroactivity of the process, coupled with the fact that the same high-cost hospitals were being identified year after year, led to a proposal to the Commissioner of Insurance by the New Jersey Hospital Association (NJHA) for front-end, prospective review of hospital budgets, particularly for the identified high-cost hospitals.

The NJHA proposal was implemented, and an Advisory Committee to the Commissioner was appointed to oversee budget review. Initially, the Committee was made up of hospital administrators, hospital trustees, and physicians; later, consumer and state government representatives were added. In its first year of operation (1968-69), the Committee reviewed fifteen prospective hospital budgets and passed along nonbinding cost review recommendations to the Commissioner.

By 1971, much of the review and analysis of prospective budgets was being performed by staff of the Hospital Research and Educational

Trust (HRET). The staff, comprised of eight to ten members, would prepare a report on the budget submissions for comment by a subcommittee of the Commissioner's Advisory Committee, who then forwarded it to the hospital for additional comments. After the subcommittee reviewed the staff report and hospital comments, it made recommendations to the full Advisory Committee, whose recommendations were then passed on to the Commissioner.

As it was structured by the HRET staff, the review process began with the submission of prospective budgets by the hospital. Each hospital's budget was compared to its own historical costs and also to budgets of hospitals judged to be comparable in size and location. These cost comparisons were the backbone of the staff analysis, which, supplemented by face-to-face negotiations with a hospital's administrators, formed the basis for the recommended per diem rates.[1] These rates, which generally met with the approval of the Commissioner of Insurance, determined the payments to be made by Blue Cross and Medicaid. Initial rates were considered tentative, so that hospitals could apply for retrospective cost review of overspending and be paid additional amounts by Blue Cross. Medicaid, however, treated the initial rates as final.

As a result of the budget review process, there was considerable turnover of hospital financial officers, due to the initially unsophisticated fiscal management and planning in the hospitals. Gradually, the peer review process, which was embodied in the HRET staff-Advisory Committee evaluation, increased hospitals' awareness of the possibilities for increased efficiency.

In 1971, while the HRET system was evolving, the state legislature passed the Health Facilities Planning Act (Chapters 136 and 138). While the legislation was primarily concerned with health planning and the establishment of the comprehensive State Certificate of Need program[2], a provision was included that broadened the state's authority to set hospital rates. This provision was initiated by Blue Cross, which felt it had borne a disproportionate share of the burden for controlling hospital rates, and which also desired to preserve its good relationship with the hospitals. The law essentially made the Department of Health a partner of the Department of Insurance in approving hospital rates paid by Blue Cross and by government agencies. Rules and regulations promulgated by the Commissioner of Health involving either planning or rate setting were to be approved by a thirteen-member Health Care Administration Board, on which the

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[1]For a detailed description of the budget review process administered by HRET, see K. Bauer and A. Clark, The New Jersey Budget Review Program, Harvard Center for Community and Medical Care, March, 1974.

[2]A program to allow or disallow capital expansion by a hospital on the basis of need for, or the financial feasibility of, the proposed project.

Commissioners of Health and Insurance would serve ex officio. With no broad-based support for change, however, the rate-setting system continued to be administered by the HRET despite passage of the 1971 planning law and was maintained with some refinements until 1974.

From its inception, the HRET budget review system was subject to charges of industry control, since participation by hospitals was voluntary and the process operated under standards and criteria that incorporated little or no industry input. Nonetheless, it is clear that the peer review system led to some acrimonious exchanges between the participants (i.e., the hospital and the budget review staff) and effected changes in hospital behavior.

Three years after the passage of the planning law, both political and financial pressures led to a radical change in both the organizational locus and the process of rate setting in New Jersey. The year 1974 marked the election of a new governor and the publication of a harsh critique of the existing system of hospital regulation. The publication Bureaucratic Malpractice[1] severely criticized the Department of Health for failing to implement the 1971 legislation, as well as the regulatory practices of the HRET. Having achieved high visibility, Bureaucratic Malpractice, which was prepared by a private research group in Princeton, had a significant impact on the thinking within the new administration. Aides to the new governor were determined to take control of hospital rate regulation away from the industry and lodge it within the Department of Health. The transition was abrupt, an indication that the governor and his staff wanted the break to be complete. An interim system for setting rates was established within the Department of Health until more permanent procedures could be established. There was little or no consultation with HRET by the Department staff, although HRET budget forms were used at first.

During this period, the New Jersey Hospital Association (NJHA) initiated a lawsuit against the Department of Health, contending that the Department could not legally set rates since it had not followed the provisions of the Administrative Procedure Act in establishing its guidelines for rate setting. The Court ruled against the Department, but after maneuvering by both sides, the NJHA agreed to dismiss the lawsuit and to not dispute the authority of the regulations being passed by the Health Care Administration Board.

In 1974--the transition year--rates were allowed to increase on a formula basis, whereby hospitals were allowed to raise their rates by percentage figures worked out by staff within the Department of Insurance. The following year, budget review was reinstituted, conducted within the Department of Health but using HRET budget forms. During this period, a more permanent methodology was developed by a public accounting firm,

[1]Issued by the Center for Analysis of Public Issues, Princeton, N.J.

Haskins and Sells, and overseen by an ad hoc committee within the Department of Health. The new methodology included a uniform reporting system, modified budget forms, and procedures for budget review and analysis.

The new system, known as SHARE (Standard Hospital Accounting and Rate Evaluation), was initially implemented in budget year 1976. (In New Jersey, hospital fiscal years are usually the same as calendar years.) Although there have been some modifications, the system has remained largely intact since that time. Due to the changes in reporting requirements, hospital cost data for the periods before and after 1976 are largely incomparable.

In order to aggressively pursue their regulatory objectives, the Commissioner of Health and other department members developed and consolidated an administrative structure while the methodology for setting hospital rates was being developed. One of their objectives included a major change in the way health care was delivered in the state. Furthermore, several of those planning the structure had had experience with Comprehensive Health Planning agencies, which had instilled in them the conviction that planning needed "teeth" to work effectively. They felt that rate setting could provide those teeth, so they created a structure that would bring planning and rate setting into one organization, established as the Division of Health Planning and Resources Development within the New Jersey Department of Health.

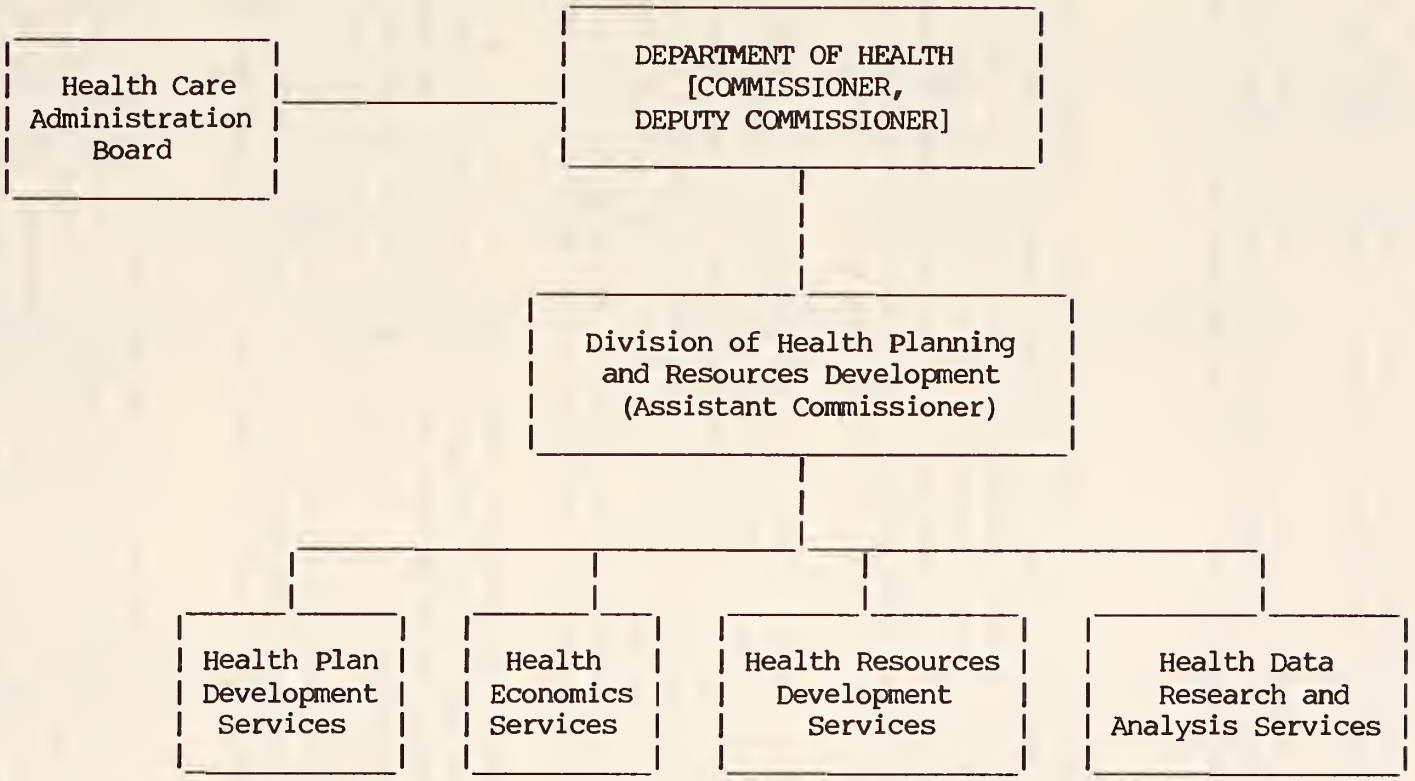
The following section provides a detailed description of the current rate-setting system as it has been implemented in New Jersey.

CONTENT AND PROCESS

Organization

Rate regulation in New Jersey is administered by Health Economics Services (HES), within the parent Division of Health Planning and Resources Development. Figure 3 presents the organizational structure for planning and regulatory activities within the Department of Health. HES has jurisdiction over three categories of activities: hospital rate setting (the SHARE system); nursing home rate setting; and developmental work related to diagnosis-based reimbursement (known as the DRG experiment). The mechanics of the SHARE system are described in this section, and a brief description of the DRG approach is also presented. As described in the section on interactions, HES is also responsible for analyzing the financial feasibility of capital expenditures under the Certificate of Need program, although positions have only been formally budgeted as of fiscal year 1980.

FIGURE 3: Organizational Chart for Health Planning and Regulation in New Jersey


Health Care Administration Board
DEPARTMENT OF HEALTH [COMMISSIONER, DEPUTY COMMISSIONER]
Division of Health Planning and Resources Development (Assistant Commissioner)
Health Plan Development Services
Health Economics Services
Health Resources Development Services
Health Data Research and Analysis Services

The scope of activities conducted within the Division is comprehensive; it includes health plan development and Certificate of Need review in addition to rate regulation. The separate activities are overseen and coordinated by the Assistant Commissioner of Health Planning and Resource Development and the Deputy Commissioner of Health through both informal channels and formal processes, some of which are still evolving.

The remainder of this section discusses the details of hospital rate setting under the SHARE system, including timing, rate-setting and comparisons, appeals and litigation, adjustments, and relevant legislation.

Timing

The timing of the rate-setting process is established by regulation. Figure 4 presents a time line for each phase of the process. (The date shown for each phase represents its end point.) For all budget years except 1978, hospital budgets had to be submitted to the analysts for "pre-desk checks" by November 1 of the year preceding their implementation. Immediately upon their receipt, analysts check the budgets for clerical and mathematical errors and enter them into the data base.

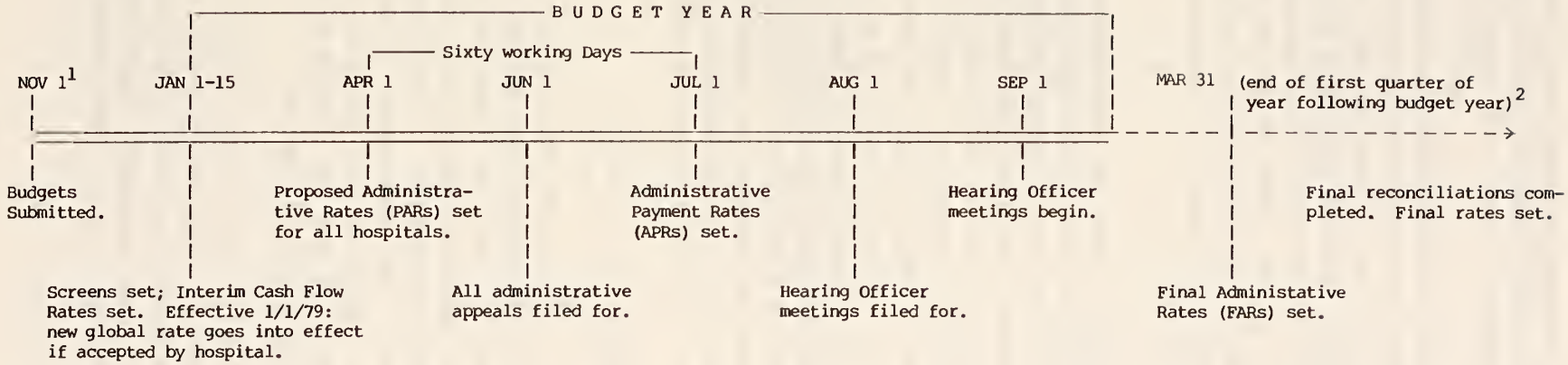
Between January 1 and 15 of the budget year, screens are set for all cost centers. These screens are based on nine months of incurred costs and utilization statistics and three months of projected costs and statistics for the previous year. Within one month, an interim cash flow rate is assigned to the hospitals. The cash flow rate usually increases a hospital's per diem by one-half of the projected economic factor[1] and is used to stabilize the hospitals' cash flow while new rates are being established.

Proposed Administrative Rates (PARs) are set for all hospitals by April 1 and are applied retroactively to the first of the year. It is at this point that disallowances are carved out of the budgets, and money is not restored to them until appeals are formally decided. Hospitals have five days after receiving the PARs to check the calculations and have any mathematical errors corrected. If the calculated PAR is lower than the interim cash flow rate that has been established, then the PAR is not implemented and the hospital continues to be reimbursed at the higher rate.

Any formal appeals involving the PAR must be made to the Department of Health within sixty working days of its receipt by the hospital. A date for an administrative hearing is set at the time the PAR is established. Ten working days prior to this meeting between the analyst and the hospital administrator and staff, a document detailing the hospital's basis for challenging the established rate must be submitted. Within ten days

[1]An adjustment for inflation.

FIGURE 4: Time Line of the New Jersey Rate-Setting Process (Applicable, except where noted, to budget years 1976-1979)


BUDGET YEAR
Sixty working Days
NOV 1[1]
JAN 1-15
APR 1
JUN 1
JUL 1
AUG 1
SEP 1
MAR 31
(end of first quarter of year following budget year)[2]
Budgets Submitted.
Proposed Administrative Rates (PARs) set for all hospitals.
Administrative Payment Rates (APRs) set.
Hearing Officer meetings begin.
Final reconciliations completed. Final rates set.
Screens set; Interim Cash Flow Rates set. Effective 1/1/79: new global rate goes into effect if accepted by hospital.
All administrative appeals filed for.
Hearing Officer meetings filed for.
Final Administative Rates (FARs) set.

[1]Moved to December 1 for budget year 1978.

[2]Moved to September 1 for budget year 1978.

of the detailed review, any other information requested by the analyst must be submitted. The analyst then has thirty working days to consider the findings and calculate an Administrative Payment Rate (APR) for the hospital.

If a hospital does not appear for an administrative hearing, then the PAR is established as the APR and Final Administrative Rate (FAR). APRs for such hospitals are set by the end of June and are then implemented, whether or not they are lower than the interim cash flow rates or PARs previously in effect. Upon receipt of the APR, the hospital has five days to uncover mathematical or clerical errors, after which it has thirty days to file an appeal of its assigned APR. Hearing Officer reviews begin about September 1 of the budget year. Due to backlogs and postponements, they may continue through the next year as well.

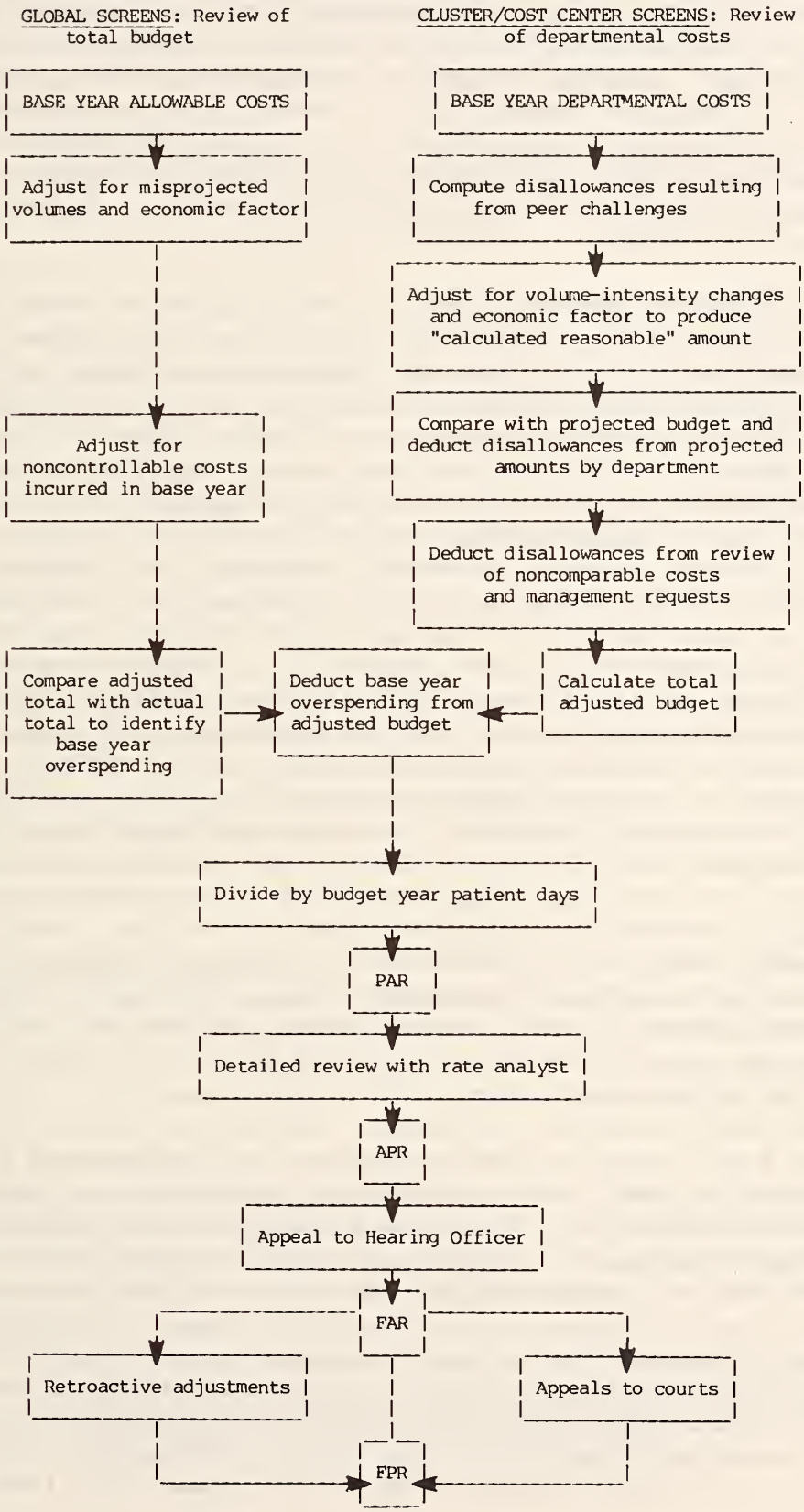
A Final Administrative Rate (FAR) is set for each hospital at about the end of the first quarter of the year after which the costs actually were incurred. Blue Cross must submit to the analysts audited data on actual hospital volumes as well as certified financial statements for each hospital. Using these numbers and their own actual final figures, the rate-setting analysts reconcile the established FAR and a hospital's Final Payment Rate (FPR). The FPR may not be higher than the FAR (adjusted retroactively for cost pass-throughs, actual volume, and actual Emergency Room Deficit). If it is, a final reduction is made to equalize them, but only when all audited actual figures are available to the analysts. It may be well over a year before a hospital's Final Payment Rate is set because of delays in obtaining these data and the backlog of appeals cases. FPR determinations for budget years 1976 and 1977 are still being held up as a result of an administrative hearing on SHARE and the economic factor.

Overall Summary of Rate-Setting Process

Hospital rates are set in New Jersey based on a combination of actual incurred costs and budgeted projections. The system can be classified as budget review with unit cost, volume, and intensity screens. Face-to-face budget negotiations are an integral part of the process but are only initiated at the hospital's request. If the hospital is willing to accept the "screened" PAR at the beginning of the rate-setting period, no negotiations take place. In fact, most hospitals are not satisfied with their screened PAR and opt for the chance to justify their proposed expenditures to the NJDH rate-setting analyst.

Cost screens are sequential. Until budget year 1979, if a hospital's total budget was within three percent of last year's total, no further screening was done, and a Final Administrative Rate (FAR) was set (see Figure 5); however, very few were in this category. As of 1979, hospitals had the option of accepting a calculated "global rate" rather than entering the SHARE system for budget review.

FIGURE 5: Sequence of Events in Budget Review Process Under New Jersey's SHARE System


GLOBAL SCREENS: Review of total budget
CLUSTER/COST CENTER SCREENS: Review of departmental costs
BASE YEAR ALLOWABLE COSTS
BASE YEAR DEPARTMENTAL COSTS
Adjust for misprojected volumes and economic factor
Compute disallowances resulting from peer challenges
Adjust for volume-intensity changes and economic factor to produce "calculated reasonable" amount
Adjust for noncontrollable costs incurred in base year
Compare with projected budget and deduct disallowances from projected amounts by department
Deduct disallowances from review of noncomparable costs and management requests
Compare adjusted total with actual total to identify base year overspending
Deduct base year overspending from adjusted budget
Calculate total adjusted budget
Divide by budget year patient days
PAR
Detailed review with rate analyst
APR
Appeal to Hearing Officer
FAR
Retroactive adjustments
Appeals to courts
FPR

Hospitals exceeding the global three percent cap or declining to accept the global rate enter the SHARE system for detailed budget review comprised of global, cluster, and departmental screens. Global screens are based on previous years' costs (called minimum base period challenges and adjustments). They are designed to adjust for: errors in projecting last year's volumes and economic factor, as well as uncontrollable costs (depreciation, interest, malpractice and utilities), and overspending in the base year. These adjustments, both positive and negative, are figured out of the global allowable projected budget for the rate year when the initial PAR is set.

Once unexpected variances from last year's approved costs have been considered, a thorough review of proposed budgets is undertaken, using both computerized, formulistic screens and individual, subjective line item review. In the standardized screening process, most hospital cost centers are first clustered into ancillary, general service, and inpatient care, to which 110 percent ceilings on base year costs are applied. If clusters pass these screens, no intracluster department analysis is done on the base year costs. For clusters showing projected unit costs greater than 110 percent of the statewide cluster median, individual cost centers are screened separately. Thus, the hospital department, or group of departments, is the basic unit that is screened, not the total hospital budget. For each department, the allowable rate base is defined to include all inpatient costs, adjusted downward for nonallowable costs in the previous year. This departmental base is then adjusted upward for allowable projected volume and intensity increases and factor price inflation (the economic factor). Any proposed expenditures within each department that exceed this "calculated reasonable" limit are challenged by the rate analyst, excluded from the PAR, and become the basis of face-to-face negotiations with hospitals. For costs deemed incomparable across hospitals, separate reviews are conducted by the rate analyst. Finally, total disallowances resulting from departmental screens are added to base period overspending and denials of incomparable costs. This total is then deducted to arrive at a total allowable hospital budget for the rate year. An interim payment rate, or PAR, is established by dividing this budgeted amount by projected patient days.

After a PAR is set, hospitals may negotiate disallowances with the rate analyst. If justified through further documentation or explanation, original disallowances are restored by the analyst and an Administrative Payment Rate (APR) is set. If hospitals fail to justify challenged spending levels, the PAR becomes the APR. The APR is subject to administrative appeal to a Hearing Officer at the hospital's request. Any changes in the APR resulting from the hearing are incorporated into a Final Administrative Rate (FAR). Year-end extraordinary adjustments for volume and unpredicted, unavoidable costs (e.g., malpractice costs), as well as recourse to the courts in cases where hospitals do not abide by the Hearing Officer's decision, lead to the establishment of a Final Payment Rate (FPR).

As of 1979, as noted earlier, hospitals have the option of accepting a calculated global rate rather than submitting to a detailed budget review under the SHARE system. The global rate is computed by increasing the previous year's approved budget (adjusted for pass-throughs) by the economic factor and hospital-specific intensity increases, and then dividing by budgeted patient days.

The following sections provide a more detailed look at the mechanics of rate setting.

Determination of the Rate Base

The determination of Blue Cross and Medicaid reimbursements in the State of New Jersey is based on all allowable inpatient costs, including physician education and training.[1] As outpatient costs currently do not come under rate review, regulators create an incentive to shift the focus of treatment to outpatient settings. This may involve the substitution of less expensive ambulatory care for inpatient care, which results in real systemwide savings, or simple cost accounting transfers to outpatient activities, which result in merely apparent savings. Teaching costs are subject to a set of screens similar to those used for other costs.

The rate base (about nine months' actual and three months' projected cost information) is first adjusted for volume variances, the Emergency Room deficit, the actual economic factor, statutory adjustments, and items excluded from the economic factor (interest, depreciation, base period challenges, and malpractice insurance). Hospitals are granted increases in their rate base if volumes were higher than predicted (see later discussion of volume adjustments for details); their rate base is correspondingly reduced if volumes were lower than predicted.

The Emergency Room deficit is the term used to describe the bad debts incurred by hospitals in operating their Emergency Rooms (ERs). Although it is to some extent an outpatient activity, Blue Cross and Medicaid pay for that portion of ER costs generated by patients subsequently admitted to the hospital, since cash receipts from patients generally do not cover the full costs of operating the ER. ER costs are compared across hospitals by geographic area (See the section on interhospital comparisons for details on peer group comparisons.), and excessive costs (i.e., those greater than 110 percent of the median) are denied. Unlike other departments, however, cash receipts in the ER are also scrutinized. If projected receipts are less than seventy percent of ER costs, NJDH requests the Hospital Service

[1]Because of particular contractual arrangements between Blue Cross and hospitals, the definition of what constitutes allowable inpatient costs differs in small ways from the base used by NJDH in calculating reimbursement rates. These differences will be explained later.

Plan of New Jersey to perform a detailed audit of the hospital's outpatient collection procedures. Based on peer comparisons of costs and analyses of receipts, a final, reasonable deficit is determined (volume adjusted) and included as a pass-through item in setting rates.[1]

Statutory adjustments include licensing, certification, and standard requirements and governmental mandates for staffing and facilities. Costs incurred due to such statutory mandates are treated as pass-throughs provided they are documented; unsubstantiated claims of compliance with licensing and other medical standards are not accepted.

Finally, the economic factor that adjusts the rate base for input price increases during the rate year excludes certain quasi-fixed or strictly exogenous factors like interest, depreciation, and malpractice insurance. Referred to as Level 3 costs (discussed later), they have special screens based on a regression equation. While excess expenditures on these items are challenged by the analyst reviewing the budget, very rarely are projected expenses denied. Sometimes, if a hospital is paying usurious interest rates, it will be requested, but not required, to refinance. The same is true for malpractice insurance. The legitimacy of depreciation expenses flows from historical asset values and approved Certificates of Need. These are treated more or less as pass-throughs by the rate setters, and they definitely are treated as such by Blue Cross because of contractual arrangements with hospitals to reimburse all capital costs receiving CON approval. Nevertheless, the projected operating costs associated with CON projects are not treated as pass-throughs. As annual operating costs are often greater than the corresponding annual depreciation, this process acts as a significant deterrent to unprofitable capital expansion.[2]

Once the rate base of the previous year's costs is adjusted for allowable variations in the above five items, two additional screens are applied. The first, called minimum base period challenge, is a disallowance of overspending or costs in the previous year that were not accounted for by any of the five items just mentioned. In other words, last year's

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[1]Under the legislation that will expand the scope of rate setting to all payors including Medicare, the question of bad debt reimbursement is a major political issue. Attempts are being made to maintain a cap on ER and other hospital deficits to maintain reasonable revenue collection efforts.

[2]If hospitals were investing in equipment and services for which charges greatly exceeded costs, then the project still may have been financially viable even though they were not recovering all of the costs from Blue Cross and Medicaid patients, another argument for increasing the scope to all payors.

allowed budget is used to screen actual incurred costs (the last three months, of course, being a projection) to make sure hospitals are staying within set budgets. If they are not, the difference is subtracted from the final allowed budget for the next rate period, thus eliminating the dynamic short-run incentive to overspend in order to raise the rate base on which future years' rates are based.

The rate base is further constrained by peer comparisons. As the cost center or cluster of cost centers is the unit of cost analysis, rate bases must be established for each cost center for comparison with line item proposed budgets. Last year's departmental costs are first screened, and if they are found to be excessive relative to those of other comparable institutions, they are reduced department by department.[1] The details of how hospitals are grouped and compared are given in the following section.

Interhospital Comparisons

The SHARE program uses extensive sequential screens for interhospital comparisons. During 1976-78, a reasonable cost comparison was made first on a global budget. As described earlier, the 1978 Rules state, "if a hospital's requested rate, before Medicare carveout, is not more than three (3) percent above its Final Administrative Rate (FAR) for 1977, no further review will be necessary (or conducted)." The final requested rate would thus be summarily approved and issued as the FAR. A hospital has the right to request changes in the global rate only for extraordinary cost increases.[2] The use of a global rate precludes any interhospital comparisons. The NJDH's philosophy is to encourage hospitals to stay within a broad inflation cap, in return for which the agency is willing to ignore specific base-cost inefficiencies that may still remain after three years of SHARE.

For hospitals that choose not to accept the global rate, the full SHARE process applies, including extensive interhospital cost comparisons on a cost center basis. Table 1 includes a listing of cost centers and the statistical data used to compare costs for budget year 1978. (Nineteen seventy-nine base period cost comparisons were derived during November-December 1978. Comparable information for the remaining years

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[1]This process is so rigorous that hospitals are actually penalized twice for overspending in the base year: once individually for the overall budget (minimum base period challenges), which is periodic in nature, and a second time department by department (peer group comparisons), which is cross-sectional. If a hospital has peer comparison challenges summing to an amount greater than its individual overspending in the base year, however, only the peer challenges stand, and the periodic challenge is ignored.

[2]The use of a global rate has been greatly expanded in setting 1979 rates. (See the section on global rates.)

TABLE 1: Hospital Cost Screens for New Jersey, 1978

New Jersey State Department of Health 1978 Rate Setting

BASE PERIOD COST COMPARISONS (Median Values)

January 1978

BUDGET GROUP	COST CENTER Abbr	Name	PEER GROUP	UNIT OF SERVICE	CHALLENGE RATIO	STATE-WIDE	HOSPITAL CATEGORY: Teaching Major T	Teaching Other O	Other Short-Term Acute Large L	Other Short-Term Acute Med G	Other Short-Term Acute Small U	Rehab Centr R	Special Care S	AREA CHARACTER** IC	U	S	R
A	ACU	Acute Care Units	Statewide	ACU Days/Admissions	1.1	34.73											
	ICU	Intensive Care Units	Statewide	ICU Days/Admissions	1.1	109.69											
	NBN	Newborn Nursery	Statewide	Newborn Days	1.2	37.69											
	SAC	Sub-Acute Care Units	Statewide	SAC Days/Admissions	1.2	34.07											
	EMR	Emergency Room (CIP)	Character	EMR Admissions	1.1									11.51	12.16	12.49	11.30
	ANS	Anesthesiology	Statewide	Operating Room Hours	1.5	9.35											
	CSS	Central Sterile Supply	Statewide	Admissions	1.1	81.62											
	DEL	Labor & Delivery Rooms	Statewide	Deliveries & Procedures	1.1	118.74											
	DIA	Dialysis	Statewide	Procedures	1.5	93.58											
	EDG	Electrodiagnosis	Category	Procedures	1.1		6.55	6.09	5.97	5.01	5.30	5.69	5.47				
	LAB	Laboratory	Category	Admissions*	1.1		84.22	66.14	58.00	59.83	58.97	84.66	70.79				
	ORR	Operating & Recovery Room	Category	OR Hours + 0.241 x Operations	1.1		55.67	57.25	56.68	50.53	61.52		42.19				
	PHM	Pharmacy	Statewide	Patient Days + 3.74 Admissions	1.1	3.58											
	PHT	Physical Therapy	Statewide	Treatments	1.5	4.96											
	RAD	Diagnostic Radiology	Category	Admissions*	1.1		38.31	35.28	30.53	29.05	29.87	39.67	18.09				
	RSP	Respiratory Therapy	Statewide	Treatments	1.1	4.49											
	CCA	Cardiac Catheterization	Statewide	Procedures	1.5	193.52											
	A&G	Administrative & General	Category	Patient Days	1.1		8.28	7.30	6.43	7.34	8.75	10.14	10.82				
	DTY	Dietary	Statewide	Patient Days, net of "In-Out Same Day"	1.1	10.21											
	FIS	Fiscal	Statewide	Admissions	1.1	57.15											
	HKP	Housekeeping	Character	Square Feet	1.1									2.46	2.63	2.64	2.58
	L&L	Laundry & Linen	Character	Patient Days	1.1									2.91	2.46	2.44	2.26
	MRD	Medical Records	Category	Admissions	1.1		15.85	14.73	13.73	15.26	16.70	42.80	53.82				
	PCC	Patient Care Coordination	Statewide	Admissions	1.2	10.00											
	PLT	Plant	Character	Square Feet	1.1									1.59	1.77	1.91	1.74
	OGS	Other General Services	Statewide	Patient Days	1.5	1.70											
	UTC	Utilities Cost	Statewide	Plant Square Feet	1.3	1.57											
B	ANS	Anesthesiology	Statewide	Operating Room Hours	1.5	9.52											
	DIA	Dialysis	Statewide	Procedures	1.5	6.03											
	EDG	Electrodiagnosis	Category	Procedures	1.1		4.21	6.18	5.72	5.81	6.19	6.22	4.39				
	LAB	Laboratory	Category	Admissions*	1.1		15.24	15.23	14.53	13.17	13.33	10.09	25.54				
	PHT	Physical Therapy	Statewide	Treatments	1.5	1.12											
	RAD	Diagnostic Radiology	Category	Admissions*	1.1		12.70	17.54	17.86	16.76	15.04	19.04	11.39				
	RSP	Respiratory Therapy	Statewide	Treatments	1.1	.30											
	EMR	Emergency Room (CIP)	Character	EMR Admissions	1.1									8.84	11.07	11.39	10.36
	CCA	Cardiac Catheterization	Statewide	Procedures	1.5	94.56											
	PCC	Patient Care Coordination	Statewide	Admissions	1.2	1.67											

*Rankings will also be prepared on COST/RVU to assist in evaluating intensity increases

**IC = Inner City; U = Urban; S = Suburban; R = Rural

TABLE 1 (continued)

New Jersey State Department of Health 1978 Rate Setting

STATISTICAL AND CONTROL DATA

January 1978

CCMED-Median Cost/Admission For Intensity Factor	Teaching T	Teaching O	Acute L	Acute G	Acute U	Rehab R	Special S
CCS Central Sterile Supply	93.78	83.20	83.44	79.63	74.69	110.68	110.18
DIA Dialysis	8.28	4.41	17.86	5.42			
EDG Electrodiagnosis	13.19	13.77	13.61	13.78	16.21	10.10	28.96
LAB Laboratory	99.12	79.54	72.11	75.13	79.41	100.73	74.81
PHM Pharmacy	49.30	46.01	41.04	40.17	45.70	133.88	63.88
PHT Physical Therapy	6.80	5.98	6.91	5.14	5.23	418.18	161.86
RAD Radiology	48.99	47.25	47.50	46.38	43.61	56.87	33.56
RSP Respiratory Therapy	24.94	19.29	18.37	19.09	19.10	37.31	12.09
CCA Cardiac Catheterization	7.11	4.39	7.96				169.12
BBK Blood Bank	7.14	8.45	5.30	4.10	4.48	6.09	17.84
OPM Other Physical Medicine	2.57	1.12	1.96	.84	.87	674.49	76.28

Equalized Physician Compensation-Challenge Limit	Teaching T	Teaching O	Acute L	Acute G	Acute U	Rehab R	Special S
EDR Education & Research	52,075	51,692	38,207	52,076	98,893		67,425
PHY Physicians	53,920	47,188	41,543	40,377	40,336	54,456	54,864
RSD Residents	15,575	15,548	17,375	14,089			16,090

Geographic Compensation Indices	North	Metro	Rural
Non-Physician			
Administrative & Clerical	.9367	1.0358	1.1377
Nursing & Technical	.9428	1.0292	1.1065
General Services	.9431	1.0242	1.1447
Physicians			
Physicians	1.0040	.9828	.9142
Education and Research	.9365	1.0216	3.3816
Residents	.9665	1.0819	.8726

	1977	1978
Standard Meal Price	1.70	1.80

Cluster Medians	Units	State wide	T	O	L	G	U	R	S
General Services	Patient Days	39.60							
Inpatient Care	Patient Days	38.07							
Ancillary Services	Admissions		360.72	308.82	286.53	285.16	282.33	618.90	288.25

Cluster Limits	Units	State wide	T	O	L	G	U	R	S
General Services	Patient Days	43.56							
Inpatient Care	Patient Days	41.88							
Ancillary Services	Admissions		396.79	339.70	315.18	313.68	310.56	680.79	317.08

	I	R	S	U
Emergency Room Full Cost Per Visit (Median)	23.22	24.80	31.12	25.89
Challenge Limit	25.54	27.28	34.23	28.48
Emergency Room Cash Receipts Per Visit	28.32	33.23	37.37	32.70
Emergency Room Physician Cost Per Visit (Median) Radiologists	1.85	2.86	3.15	2.34
Emergency Room	7.64	9.01	9.08	8.92
Other	.42	.55	.65	.65
Challenge Limits				
Radiologists	2.03	3.15	3.47	2.57
Emergency Room	8.40	9.91	9.98	9.81
Other	.46	.60	.72	.72

	Non-Physician	Physician
Median Cost Per RVU Laboratory	.19	.05
Median Cost Per RVU Radiology	1.58	.84

	Factor
Economic Factor Bureau of Labor Statistics	1.070

SHARE has been in existence [1976 and 1977] is provided in Appendix A.) Cost centers are separated into two budget groups--nonphysician (A) and physician (B)--and are treated separately for purposes of cost comparison.

The Peer Group indicates the level of aggregation for comparison. Three cost center levell aggregations are used: statewide, hospital category, or area character. "Statewide" means that data from all hospitals reporting a particular cost center are used to calculate a median cost for determining a final screen. Because it was felt that case mix and scale economies or diseconomies resulted in the grouping of cost centers that were incomparable across types of hospitals, seven separate groups were generated, each with its own median cost (see Laboratory, for example). These seven hospital categories are: major teaching (T); other teaching (O); large (L), medium (G), or small (U) nonteaching short-term acute hospitals; rehabilitation centers (R); and specialized care facilities (S). Allowances for geographic location (area) are also made in a few instances, viz., emergency room (computed inpatient costs), housekeeping, laundry and linen, and plant. The four geographic distinctions made are: inner city (IC), urban (U), suburban (S), and rural (R). A definition of each hospital type and area character is provided in Table 2. Generally speaking, the more prevalent the statewide groupings (these could be considered as nongroups), the tougher the cost comparison will be, all things being equal. This can be offset, of course, by more generous cost "corridors," to be discussed later.

The units of service that serve as the denominators of the cost comparisons appear in the next column of Table 1. For many cost centers, admissions are used as the unit of service. For hospitals with exceptional case mixes exhibiting long lengths of stay (LOS), an "admissions" denominator may bias their costs upward. To adjust for variations in LOS that are case-mix-related, a new, case-mix-adjusted admission figure is used to recalculate any costs that are challenged by the system. A challenge ratio has been assigned to each cost center, which indicates the threshold level above the median beyond which costs will be challenged and perhaps ultimately disallowed. If the adjustment raises the denominator sufficiently, the cost challenge is generally dropped.[2]

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[1]The term "level" is not to be confused with "cluster levels," which will be explained shortly.

[2]The index used to adjust admissions is derived from data on hospital case mix and LOS, now being gathered in preparation for case-mix-oriented reimbursement beginning in 1979. The index for a specific hospital would be the percentage of its patients in various diagnostic categories weighted by state average LOS by diagnosis (to avoid endogeneity), divided by state average LOS. If a hospital's casemix had a state average LOS of eight days while the average LOS for the whole state was 7.5 days, admissions would be increased in that hospital by 8.0/7.5 = 1.067. This would eliminate some existing peer challenge, but not necessarily all of it.

TABLE 2: Definitions of Hospital Categories and Area Characters

HOSPITAL CATEGORIES:

T - Major teaching hospitals: This category includes hospitals that have at least two AMA/AOA residency programs in internal medicine, general surgery, pediatrics, obstetrics and gynecology, general practice or family practice and more than one resident per eight licensed beds;

O - Minor teaching hospitals: At least one AMA/AOA approved residency program and more than one resident per twenty licensed beds;

L - Large general acute hospitals: 300 or more licensed beds;

G - Medium general acute hospitals: 130 or more licensed beds;

U - Small general acute hospitals: Less than 130 licensed beds;

R - Rehabilitation centers;

S - Other specialized facilities such as orthopedic hospitals, neurological rehabilitation centers, and specialized surgery centers.

AREA CHARACTERS:

IC - Inner city: If a hospital is located in a city of more than 50,000 population (or in a city of more than 10,000 population that is in a county whose population density is more than 2,500 per square mile) and that city has more than ten percent of families with income less than the poverty level, that hospital shall be categorized as an "inner city" hospital unless the hospital is located in a neighborhood that is atypical of the city (e.g., less than twelve percent of patient days are Medicaid patients).

U - Urban: Hospitals that are located in cities of more than 25,000 population that have high population density.

S - Suburban: Hospitals that are located in cities or towns of more than 10,000 population that are characterized by factors such as high percentage of single-family, owner-occupied housing and medium population density.

R - Rural: If a hospital is located in a place of less than 25,000 population in a county whose population density is less than 250 per square mile.

Next appears the median cost figure for statewide, hospital category, or area characteristic groupings. For example, for the ACU (routine medical and surgical nursing care) cost center, the median per day cost in 1978 was $34.73. The median cost figure is multiplied by the challenge ratio to produce the challenge limit. In most cases, hospitals are allowed up to ten percent above the median before their costs are scrutinized, but in some cases the screens are twenty percent to fifty percent above the median. The higher screens are used in instances where hospital groupings are not used and/or significant variation exists in the extent of physician-nonphysician substitution.

The number of hospitals that do not pass the screen in any cost center depends upon: whether or not grouping was used; the challenge ratio; and the tightness of the distribution around the median. Of the 101 hospitals whose ACU cost centers were included in the calculation of the screen for 1978, only 12 were actually over the median by more than 110 percent. Of these 12, only two were grossly over (greater than $5.00 per day).

The NJDH recognizes that high costs in one department may result in cost savings in others. Because of this, a sequential screening process is used wherein rate analysts first look at levels and clusters of cost centers. Four "levels" are recognized. Level 1 cost centers are those that are presumably common and comparable across all hospitals, such as dietary, fiscal, and acute and intensive care nursing. Level 2 centers, including physician costs and fringe benefits, are not common across hospitals, while Level 3 centers (which include depreciation and interest) suffer from nonuniform reporting, and hence require special cost analyses. The same is true of Level 4 centers, which include long-term care units and off-site services.

Level 1 cost centers are further clustered into three functional areas: general services, ancillary services, and inpatient care. The current classification of cost centers by cluster and level is listed in Table 3. For example, Level 1 general services include: administrative and general, dietary, fiscal, housekeeping, medical records, plant, and laundry. Patient days are used as the unit of service for general services and inpatient care, while admissions are used for ancillary services. For example, in 1978, for hospitals with total general services costs per diem that were less than 110 percent of the state median of $39.60 (see Table 1), no reductions in the cost base for general service departments were necessary.

Costs may vary by geographic area because of differences in inflation. To eliminate resulting errors in comparison, labor costs are first "equalized" for occupational groups: administrative and clerical, general services, maintenance; and nursing and ancillary. This is done by multiplying projected total employee compensation (including wages

TABLE 3: Cost Center Record

FUNCTION/COST CENTER	LEVEL	PEER GROUP	UNITS OF SERVICE	CHALLENGE RATIO	COST INCREASE ANALYSIS VARIABILITY FACTORS		MARKET BASKET CATEGORY
					Personnel	Supplies	
Inpatient care							
Acute care units (ACU)	1	Statewide	ACU days/admissions	110	50	100	Med Supp
Intensive care units (ICU)	1	Statewide	ICU days/admissions	110	50	100	Med Supp
Newborn nursery (NBN)	2	Statewide	NBN days	120	50	100	Med Supp
Subacute care units (SAC)	1	Statewide	SAC days/admissions	120	50	100	Med Supp
Skilled nursing facility (SNF)	4	None	Not evaluated		50	100	Med Supp
Outpatient care							
Emergency services (EMR)	2	Character	Visits	110	50	100	Med Supp
Clinics (CLN)		Character	Not evaluated	N/A	50	100	Med Supp
Off-site health service (OHS)	4	None	Not evaluated		50	100	Med Supp
Ancillary services							
Anesthesiology (ANS)	2	Statewide	OR hours	120	50	100	Med Supp
Blood bank (BBK)	3	Statewide	Not evaluated		0	100	None
Cardiac catheterization (CCA)	2	Statewide	Procedures or patient visits	50	50	100	None
Central and sterile supply (CSS)	1	Statewide	Admissions	10	50	100	Med Supp
Delivery and labor rooms (DEL)	1	Statewide	Deliveries and procedures	10	50	100	Med Supp
Dialysis (DIA)	2	Statewide	Procedures	50	50	100	None
Electrodiagnosis (EDG)	1	Category	Procedures	10	50	100	None
Laboratory (LAB)	1	Category	Admissions	10	50	100	Lab
Nuclear medicine (NMD)		Statewide	Not evaluated		50	100	None
Operating and recovery rooms (ORR)	1	Category	OR hrs. + (.241 x operations)	106	50	100	Med Supp
Other physical medicine (OPM)	3	Statewide	Not evaluated		50	0	None
Pharmacy (PHM)	1	Statewide	(3.74 x admissions) + IP days	110	50	100	Drugs
Physical therapy (PHT)	2	Statewide	Treatments	150	50	0	None
Radiology diagnostic (RAD)	1	Category	Admissions	110	50	100	Radiology
Respiratory therapy (RSP)	1	Statewide	Treatments	110	50	100	Med Supp
Therapeutic radiology (THR)		Statewide	Not evaluated		50	0	None

Notes: One - Hospitals that project volume increases in excess of ten percent as a result of a facility expansion will be reviewed using variability factors of 100 percent for affected cost centers.

Two - "Statewide" comparisons of general service costs will be made separately for acute care hospitals and all other hospitals.

TABLE 3: (continued)

FUNCTION/COST CENTER	LEVEL	PEER GROUP	UNITS OF SERVICE	CHALLENGE RATIO	COST INCREASE ANALYSIS VARIABILITY FACTORS		MARKET BASKET CATEGORY
					Personnel	Supplies	
Physicians							
Physician coverage (PHY)	3	Category		—	0	0	None
Residents (RSD)	3	Category		—	0	0	None
General Services							
Administrative and general (A&G)	1	Category	Patient days[1]	110	0	0	None
Dietary (DTY)	1	Statewide	Patient days[1]	110	50	100	Food & Misc
Fiscal (FIS)	1	Statewide	Admissions	110	50	100	None
Housekeeping (HKP)	1	Character	Square feet[2]	110	0	0	Misc
Malpractice insurance (MAL)	3	Category	Patient days	—	0	0	None
Medical records (MRD)	1	Category	Admissions	110	50	50	None
Patient care coordination (PCC)	2	Statewide	Admissions	120	0	0	None
Plant (PLT)	1	Character	Square feet[2]	110	0	0	Misc
Utilities cost (UTC)	2	Statewide	Square feet[2]	130	0	0	None
Other general services (OGS)	2	Statewide	Patient days	150	0	0	None
Laundry and linen (L&L)	1	Character	Patient days	110	50	50	Misc
Other							
Education and research (EDR)	3	Category		—	0	0	None
Fringe Benefits							
Legal fringe benefits (LFB)	—	Statewide	Hours	—	0	100	None
Policy fringe benefits (PFB)	—	Statewide	Hours	—	0	100	None
Pensions (PEN)	—	Statewide	Hours	—	0	100	None
Interest (INT)	3	Statewide	Patient days	—	0	0	None

[1]Excluding "In and Out" surgery days.

[2]Inpatient percentage for this cost center.

and fringes)[1] in each hospital by a geographic wage index. The index is the ratio of the median labor rate per hour in each occupational category statewide to the median rate for a substate area (see Geographic Compensation Indices, Table 1). In 1978, for example, nonphysician administrative and general service costs in Northern New Jersey were multiplied by .9367 to make them comparable in real input terms with those in the rest of the state. Nonlabor costs, minus expense recoveries, are then added to adjusted labor costs, producing total equalized costs. These costs form the basis of comparison among clusters of departments and individual cost centers.

Physician costs are screened separately from nonphysician costs, but essentially the same methods are used. A smaller number of cost centers are used, and teaching and research are handled as separate cost centers rather than being allocated over patient care departments. Table 1 lists the equalized dollar limits (110 percent of the state median) on salaries for three groups: education and research personnel, physicians, and residents. Unlike other cost centers, salaries paid to physicians are screened, not education and research costs per admission.

Volume and Intensity Adjustments

When hospitals submit their proposed budgets, they include historical (1976-1978) and projected utilization data on:

- inpatient admissions and patient days, by medical/surgical category and payor source;
- average length of stay by medical/surgical unit;
- beds and occupancy rates by medical/surgical unit;
- outpatient visits, including emergency room, clinic, and home health; and
- ancillary services by cost center.[2]

Rate analysts perform a preliminary screen of these statistics, especially occupancy rates, lengths of stay, and patient days, and refer a small percentage of cases (three to four percent) to the planning agency for investigation. Hospitals are required to notify the Health Department if volumes used in the budget submission are two percent or more above last year's levels. Only these exceptional changes are referred to planning.

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[1]Included in fringes are the usual items plus subsidized meals and the imputed value of self-insurance.

[2]See the section on data requirements for more detail.

The rate-setting process distinguishes between volume and intensity in the following manner. "Volume" includes admissions and patient days, as well as specific procedures for other ancillary services. Hospitals must make volume projections for each unit of service listed in Table 1. "Intensity" is defined as the cost per admission in each cost center. For example, whether increases in nursing costs per admission will be allowed will depend on the relative costliness per case in Acute Care Units, to be described later.

Volume adjustments are made by looking at last year's projections and then providing allowances for changes the next year. Adjustments are made to the rate base for variations in previous years' actual volumes from their projected figures; if a hospital's patient days last year were higher than predicted, additional, previously disallowed costs are factored back into the rate base. This is done using fixed and variable ratios (called variability factors). If utilization were lower than expected, costs would be "carved out" of the rate base using the same ratio. The ratios are generally fifty percent variable for personnel and 100 percent variable for supplies, except for some major overhead cost centers like Administration and Housekeeping, where no cost variation is allowed (see Table 3 for department variability factors).

Two volume adjustments are made. For ancillary services, inpatient admissions are used to determine volume-generated cost increases. For other cost centers, patient days constitute the volume measure. For example, if admissions in a hospital are projected to increase four percent and last year's costs in the Pharmacy cost center broke down into $150,000 in salaries and $400,000 in supplies, the total allowable increase in Pharmacy costs due to volume would be $19,000 ($150,000(.5)(.04) + $400,000(1.0)(.04)), or an increase of 3.45 percent. Because salary costs in Pharmacy are presumed to be only fifty percent variable, only one half the percentage change in admissions is applied to salary expenses. Note that the percentage increase in allowable Pharmacy costs is somewhat less than the four percent volume increase; the discrepancy is obviously due to the assumption that fifty percent of salary costs are unrelated to small volume changes.[1]

Besides volume adjustments, an additional allowance is sometimes made for intensity increases. Whether the hospital will be permitted any allowable intensity increase on top of volume changes in a particular department will depend upon that department's costs per admission relative to peer hospitals. If the department happens to be over the 110 percent

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[1]When patient volumes are budgeted to increase by 10 percent or more owing to substantial changes in facilities, all costs in the affected cost centers are considered to be 100 percent variable.

ceiling of median costs/admission, then no intensity increase is considered "presumptively reasonable" and the hospital must justify any intensity increase to the analyst. The following sliding scale of permitted intensity increases is used below the ceiling:

Percentage of Median Value	Allowed Intensity Increases
100 - 110%	1%
90 - 100%	2%
< 90%	3%

For example, if a hospital has average dialysis costs/admission that are less than ninety percent of the median for all dialysis departments in its peer group, then it is allowed a three percent increase in departmental costs for intensity. This three percent would be added onto the volume projection (approximately four percent), then applied to costs using the variability factors. Naturally, if the hospital does not project cost increases of this magnitude, its budget would not be adjusted upward.[1]

This intensity adjustment procedure provides a positive incentive for low-cost hospitals to raise intensity and a negative incentive for high-cost hospitals to do so, an attempt to reward the efficient and penalize the inefficient. It is the Department's feeling that any increases in intensity above these percentages, "in the absence of demonstrable case mix considerations," should be achieved through productivity increases or other cost savings.

Although analysts have some flexibility in face-to-face negotiations to grant "quality-related" intensity increases, they rely heavily on peer group intensity comparisons to support denial of large increases. The burden of proof is on the hospital; quality improvements must be positively linked with the intensity increases, or, alternatively, the hospital must show how a comparable hospital is able to operate at a lower cost with the same intensity level.

[1]A special procedure is used to project intensity increases for laboratory and diagnostic radiology using Relative Value Units (RVUs). In these two areas, each hospital's lab and radiology department's costs per RVU are compared to the statewide median RVU cost, and the hospital is allowed one half the difference in the two rates of intensity change. The other half is supposedly convertible into productivity increases.

Economic Trend Factor

An economic trend factor is used to adjust for price inflation. It is applied across the entire industry to most allowable costs by department.[1] Beginning in 1976, the factor was composed of a weighted average of Average Hourly Earnings of Manufacturing Employees in New Jersey (BLS) and the National Consumer Price Index, the weights being 2/3 and 1/3, respectively. In a special hearing in October 1976, this economic factor was found to be "lacking in refinement and fairness," in that the factor did not reflect either the purchasing patterns or the labor mix of the New Jersey hospital industry. Revisions in the factor have ensued, resulting in greater and greater disaggregation of cost items and in the development of new proxies. The most significant change was the substitution of the BLS Employment Cost Index for the Northeast in place of the manufacturing hourly earnings index for New Jersey. Table 4 contains a detailed breakdown of the economic factor in use in 1978. A new, even more detailed factor is proposed for 1979.

In general, the factor is relatively exogenous to the industry--care has been taken to use either national indices like the CPI or WPI or regional indices like the Northeast Employment Cost Index. Individual New Jersey hospitals have essentially no influence on the factor, and the industry as a whole could only have the most marginal influence. The economic factors that have been used so far, which have averaged approximately seven to eight percent, are considerably below the overall rate of inflation within the industry.

As was mentioned earlier, in determining the rate base for budget projections, a year-end adjustment for the difference between the projected and the actual economic factor was supposed to be made. However, in the first three years of the program, this was not done. Now, under the new proposal, the index will be recomputed for the nonlabor portion after six months, with adjustments to be made if the error is greater than one percentage point.

The use of an exogenous inflation index obviates the need to discuss appropriate wage payments in particular hospitals. It is the Department's view that wage settlements should be at the discretion of hospital administration; hospitals can pay more or less than is allowed under the Economic Factor. If they pay more, however, they must find the money from another source, e.g., by increasing productivity, upgrading the quality of the work force, or cutting back on other costs. Components of the index are viewed only as guides, not requirements.

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[1]Mortgage interest, depreciation, base period challenges, and malpractice insurance are excluded from the base.

TABLE 4: Components of Economic Trend Factor

COST COMPONENT:	Nonphysician Salaries, Physician Salaries, and Fees
PROXIES:	Employment Cost Index (ECI) Northeast
COST COMPONENT:	Fringe benefits
PROXIES:	Supplements to Income, Survey of Current Business, United States Department of Commerce
COST COMPONENT:	Office Supplies
PROXIES:	WPI 0915-06 Office Supplies and Accessories (20%) WPI 0913-0131.09 Paper Bond No. 4 (40%) WPI 0913-0133.01 Paper, Form Bond 12 lb. (25%)
COST COMPONENT:	Medical Records Supplies
PROXIES:	WPI 0916-06 Office Suppplies and Accessories (50%) WPI 0913-0131.09 Paper Bond No. 4 (25%) WPI 0913-0133.01 Paper, Form Bond 12 lb. (25%)
COST COMPONENT:	Raw Food
PROXIES:	WPI 02 less 029 Processed Foods and Feeds Less Animal Feeds
COST COMPONENT:	Other Dietary Supplies
PROXIES:	WPI 0915-0109.05 Paper Goods, Household Napkins (10%) WPI 0915-0335.02 Paper Goods, Paper Plates (10%) WPI 0915-0333.03 Paper Goods, Hot Cups (10%) WPI 0722-0204.05 Plastic Goods, Polyethylene Liner (7.5%) WPI 1261 Dinnerware (22.5%) WPI 1264-0113.02 Household Flat Ware, Stainless Steel (22.5%) WPI 0671 Soap and Synthetic Detergent (17.5%)
COST COMPONENT:	Housekeeping Supplies
PROXIES:	WPI 0915-01 Sanitary Paper and Health Products (30%) WPI 0722.02 Polyethylene (20%) WPI 0361 Textile House Furnishings, Cotton (10%) WPI 0671 Soap and Synthetic Detergents (40%)
COST COMPONENT:	Laundry and Linen Supplies
PROXIES:	WPI 0671 Soap and Synthetic Detergents (60%) CPI Linen (40%)
COST COMPONENT:	Repairs and Maintenance Supplies
PROXIES:	CPI Maintenance and Repairs Commodities (50%) WPI 1081 Bolts, Nuts, Screws, and Rivets (25%) WPI 1083 Lighting Fixtures (25%)

TABLE 4: (continued)

COST COMPONENT:	Drugs
PROXIES:	WPI 063 less 0636 Drugs and Pharmaceuticals
COST COMPONENT:	Laboratory Supplies
PROXIES:	WPI 138 Glassware (18%) WPI 061 Reagents Industrial Chemicals (82%)
COST COMPONENT:	Diagnostic Radiology Supplies
PROXIES:	WPI 1542 Photographic Supplies
COST COMPONENT:	Medical/Surgical Supplies
PROXIES:	CPI Adhesive Bandages, Package (9.7%) WPI 07 Rubber and Plastic Products (30.9%) WPI 067 less 067.9 Other Chemicals and Allied Products (3.3%) WPI 1135.02 Precision Measuring Tools (1.6%) WPI 063 less 063.6 Chemicals, Drugs, and Pharmaceuticals (18.8%) WPI 0915.01 Sanitary Papers and Health Products (5%) WPI 0361 Cotton (10.4%) WPI 0327.03 Synthetic Threads (76%) WPI 1132 Power Driven Hand Tools (0.7%) WPI 1135.01 Small Cutting Tools (8.3%)
COST COMPONENT:	Electrodiagnosis Supplies
PROXIES:	WPI Table 13, 36241 Electrodes (63%) WPI 0913.01 Paper except Newsprint (37%)
COST COMPONENT:	Contracted Laundry and Linen
PROXIES:	CPI Housekeeping Services, Laundry, Flatwork, Finished Service (80%) CPI Household Furnishings and Operation Textiles, Sheets, Full, Flat (20%)
COST COMPONENT:	Other Expenses
PROXIES:	CPI Services, Services less rent except Medical Care Services
COST COMPONENT:	Working Capital Interest
PROXIES:	Prime Interest Rate

The economic factor is applied to the rate base by cost center (composed of allowable inpatient costs in the previous year), adjusted downward for peer challenges and upward for allowable increases in volume and intensity. The resulting figure is called "calculated reasonable" costs and is compared to the dollars hospitals have budgeted. The over-budgeted dollars are automatically taken out in setting the initial PAR (depending on the cluster screen, which may result in no challenge of departmental dollars). These subtractions are generally the focus of the budget review that subsequently takes place between the rate analyst and the hospital.

Scope and Nature of Budget Review/Negotiations

Once a PAR is set and hospitals are notified, administrators may request to sit down with the rate-setting staff and review their PAR, including line item deductions. Hospitals must submit in advance written documentation on all items they wish to discuss. If hospitals fail to provide written documentation (or fail to appear at the review), the PAR is established as the APR. Hospitals must appear for the review if they are to preserve their right to appeal the APR to the Hearing Officer.

Those attending the detailed budget review include the Health Department's rate analyst, possibly the analyst's supervisor, and any representative of the hospital (occasionally including the hospital's attorney). The rate analyst runs the meeting, responding point-by-point to the written documentation previously submitted by the hospital. The meeting is informal and spontaneously interactive. The rate analyst reviews the Department's written documentation of "presumptively unreasonable" costs with the hospital, indicating where disputed items are not supported by sufficient documentation. Hospital representatives are allowed to elaborate verbally on their written documentation and may submit further written documentation within ten days of the end of the budget review, after which no further documentation is permitted.

The general impression one gets from actually observing a detailed review, talking with analysts, briefly scanning a few disputed issues in hospital files, and talking with hospital representatives is that the rate analysts are very rigorous in these face-to-face reviews. First and foremost, the analysts rely heavily on the initial screening in responding to hospital requests for additional money. To evaluate claims that a hospital's costs are high because of superior quality, analysts rely on licensing, JCAH, and other medical standards that hospitals must meet. Unless a hospital is in direct violation of these standards, arguments for cost increases to improve quality do not bear much weight. Input ratios across hospitals are also considered. Because they are being compared to their peers in particular departments, it is implied that they must also demonstrate superior quality relative to specific institutions (e.g., major teaching institutions).

Ancillary departments are especially vulnerable in the instance of a "quality" argument. Often these involve alleged case-mix differences. By 1978, analysts possessed detailed case-mix data on virtually every hospital in New Jersey.[1] Thus, the data exist to corroborate or refute claims that a hospital's case mix is "more complex." As was discussed earlier in the section on interhospital comparisons, adjustments are also made in certain units of service such as admissions for case-mix-related variations in lengths of stay.[2] This eliminates many arguments that a complex case mix results in higher costs per admission. In ancillary departments, challenge limits are broader in some instances (e.g., fifty percent greater than the median), and departments are first grouped for an overall cluster screen allowing for a trade-off of costs across departments. Hospitals failing both of these screens have a difficult time justifying additional costs.

Wages is another issue that often complicates budget reviews. Hospitals often claim that unions have forced them to pay higher wages, or that they must increase wages to remain competitive. The union argument, while easy to document, can establish an inflationary precedent if union-negotiated settlements are treated as a pass-through. The competitive wage argument not only sets an inflationary precedent if approved, but is also difficult to document. It is the Health Department's position that determination of compensation rates is a management prerogative. The amounts that hospitals decide to pay their staff is an internal decision; however, the economic factor will ultimately determine which hospitals will be allowed to raise wages to reflect local rises in inflation. Naturally, hospitals that are significantly under the peer challenge limit for a cost center or cluster of centers may raise wages faster because they are not incurring any reductions in their wage base. If a hospital cannot find a cost-effective way of paying competitive wages, it is encouraged to consider sharing services or merging with another hospital. The implications of this strategy for rate analysts are clear: they need not consider either the union-negotiated settlements or the competitive wage arguments in the face of already excessive departmental costs.

Intensity change is another difficult area for budget review. Again the analyst relies heavily on peer comparisons. Allowances for intensity increases are granted as a reward for cost containment; hospitals below the challenge limit are rewarded with volume plus intensity increases. Cost increases beyond those allowed for intensity (and inflation) have to be

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[1]See the section describing the measurement and detail of these case-mix data (called DRGs, Diagnosis Related Groups).

[2]This case-mix adjustment naturally would not apply for ancillary departments using specific outputs as the unit of service, e.g., x-ray procedures.

justified through previously submitted Legal and Management Reports. In these reports, legally mandated changes in personnel and equipment have to be listed and discussed, as well as management's rationale for discretionary additions to personnel. Presumably, if hospitals can make a strong case for these management additions, they can be granted cost increases above "calculated reasonable" limits. Analysts tend to interpret the rules conservatively, however, allowing adjustments sparingly. Denials in this area result in a large porportion of the subsequent hospital appeals to the Hearing Officer.

Once the rate analyst has reviewed all of the written documentation, he or she sets an Administrative Payment Rate. Originally, this rate excluded certain costs already incurred by the hospital, either through overspending in the previous year or through unjustifiable spending in the first quarter of the rate year prior to the establishment of the PAR. Eventually, the Hospital Association appealed to the Health Department on the grounds that hospitals were not allowed any time in which to pare down their expenditures to avoid financial deficits. A Hearing Officer agreed with the Association, and Time-Phased Implementation Plans were established. Upon receipt of its APR, the hospital may now choose to submit a Time-Phased Plan designed to eliminate the challenged expenditure within a year's time.[1] The challenged costs are entered into the revised APR for that year only; they are not put back into the rate base, so as to avoid the same overspending problem in future years. That is to say, if hospitals fail to achieve their plan for phasing out excess costs during the rate year, they will be fully penalized for that failure in subsequent years, unless, of course, they have achieved cost savings in other ways.

Whenever rate setting involves face-to-face negotiations, the threat of capture increases because: over time, analysts can become sympathetic to the position of a particular hospital; they generally lack and may defer to the intimate knowledge that hospital administrators have regarding complex cost questions; and they are often less experienced than administrators. Hospital representatives often claim, however, that analysts make arbitrary, negative decisions precisely because of a lack of experience and understanding.

In order to guard against both capture and arbitrariness, the NJDH assigns a supervisor to each analyst. It is the supervisor's responsibility to review decisions with the analyst for rigor and fairness. Because the supervisor deals with several analysts, he or she provides a check on internal consistency; presumably analysts that are too tough or too arbitrary

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[1]The hospital can also appeal its APR to the Hearing Officer. If it submits a Time-Phased Plan, however, it forfeits the right to appeal later on a particular challenge.

are encouraged to be more flexible, while those that seem too lenient are asked to require stronger documentation for approvals. Occasionally, analysts are overruled by their supervisors (supervisors must sign off on all negotiated APRs), and sometimes analysts are rotated to other hospitals if personality clashes arise.

Actually, interpersonal conflicts between analysts and hospitals have to an extent been alleviated inadvertently by the high turnover in analyst staff. Ten out of eleven analysts reviewing the 1979 budgets are new as of last year.[1] The industry has criticized the Department for the high turnover and lack of familiarity with the hospital industry on the part of the new analysts. Heavy reliance, therefore, is put on supervisors for familiarizing new analysts with a particular hospital and apprising them of decisions and agreements that have been made in the past.

While there are no explicit rewards for holding costs down, supervisors encourage technically sound, documented, rigorous review. Also, because the burden of proof is on the hospital rather than the analyst, there is pressure to treat costs as pass-throughs. In general, supervisors take professional pride in the quality of the review, a pride which apparently is not lost on the new analysts.

As in most budget review systems, an "informal" negotiation process is provided for, both before and after the budget review. Hospitals can obtain an informal hearing with any of the analyst's superiors, including the head of Health Economics Services, the Assistant Commissioner for Health Planning and Resource Development, the Deputy Commissioner, and the Commissioner. The ability to informally present one's case before a Commissioner supposedly adds flexibility and reason to the system. Because of their inexperience, analysts cannot be expected to evaluate hospital arguments from an historical, political, or legal perspective; they must essentially follow the rules and screens and are encouraged to do so. It is particularly the responsibility of the Assistant and Deputy Commissioners to evaluate hospital arguments on a broader level, to consider the political and legal implications of decisions, and to generally project the image of fairness and flexibility.

Rules and screens never can adequately address idiosyncratic variances from industry norms. Thus, the process of contesting disallowances has implications for policy, which ultimately must be made by the Commissioners (and approved by the Health Care Administration Board). For example, a hospital might claim that it was unfairly penalized for

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[1]Of the ten analysts lost by the rate-setting group last year, three were transfers to the CON Financial Feasibility Group. Most of the others took jobs in the hospital industry.

having Pharmacy costs higher than other hospitals' due to its teaching function. Analysts cannot ordinarily accept such an argument because it goes against established peer comparison methods approved by the HCAB. Informal appeal to the Commissioners, however, might (and in this case did) lead to a disaggregation of hospitals into teaching and nonteaching categories; the prima facie legitimacy of the case was recognized, accepted, and incorporated into the rules and screens.[1] Department policymakers are especially sensitive to legitimate cases because it reflects badly on them when they are overturned in court; losing one or two cases in court can seriously jeopardize the Department's position in further cases.[2]

Global Rate

The global rate, which became a voluntary alternative to the SHARE budget review in 1979, essentially resulted from the application of an economic factor, plus hospital-specific intensity and programmatic adjustments, to the 1978 approved budget, which was then divided by budgeted patient days to produce a new per diem amount. Each hospital was notified of its approved global rate at the end of 1978; under the terms of the new regulations, hospitals had to request "alternative" rate determination (i.e., the usual SHARE system) by January 1, 1979.

The global rate alternative was adopted in hopes of reducing the administrative burdens on both the Department and the industry. A hospital is required to submit all the SHARE schedules (as before), but if it accepts the global rate, it no longer has to address particular departmental challenges during the detailed review or invest further resources in administrative and court appeals. With the number of detailed reviews reduced, the SHARE staff can work to improve the quality of review for those hospitals remaining within the budget review system.

The procedure for calculating each hospital's global rate consists of the following steps:

(1) The prior year's approved budget is adjusted to take into account the difference between actual and projected expenditures for selected pass-through items (including utilities, interest, legal fringe rate, malpractice insurance, and certain other expenses).

(2) The adjusted budget is then inflated by the economic factor, applicable statewide.

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[1]Over time, a similar disaggregation has occurred in Central Sterile Supply, Physical Therapy, Respiratory Therapy, and Fiscal cost centers.

[2]See the section on appeals and litigation for further discussion.

(3) This amount is further inflated for increased intensity and new programs, depending on the outcome of three cluster screens (for general services, inpatient care, and ancillary services). Additional allowances of up to two percent for non-physician costs and one percent for physician costs will be granted, depending on the hospital's cost levels relative to hospitals statewide or to those in its peer group.

(4) This "global base," plus approved interest and depreciation, is then divided by budgeted inpatient days to obtain the new per diem rate. Slight adjustments are then made to arrive at Medicaid and Blue Cross rates, reflecting differences in allowable costs for each.

Preliminary data indicate that approximately fifty hospitals (nearly half) have accepted their calculated global rates for 1979. By doing so, they have forfeited their right to appeal their 1979 rate and have agreed that this rate will not be affected by the outcome of any prior year adjustments. These hospitals have apparently concluded that the approved global rate is as high as or higher than the rate they would have been granted under budget review, or that the additional amount that might have been obtained through budget review would not justify the cost and inconvenience involved.

Data Requirements and Analysis

The reporting requirements currently in effect are extensive. Data used in setting rates come from five sources: SHARE forms, the DRG experiment, written documentation from hospitals, health planning statistics, and rate information.

SHARE Forms. The data routinely collected from hospitals through the SHARE Budget Submission Forms for the period 1976-78 include:

- actual and budgeted costs by cost center;
- inpatient admissions, patient days, length of stay, beds, and occupancy rate by acute, intensive, newborn, and SNF units;
- inpatient admissions and revenues by payor (Medicare, Medicaid, Blue Cross, Commercials, medically indigent, self-insured, and self-pay);
- outpatient visits in emergency rooms, clinics, and home health;

- ancillary volumes, including operating and delivery room hours; lab and radiology tests, procedures, and RVUs; nuclear medicine, electrodiagnosis (EEG, EKG, EMG), dialysis, respiratory and physical therapy, and cardiac catheterization procedures; CAT scans, mega-voltage patients; open heart surgical procedures; kidney transplants and same-day surgeries;

- total employee and staff MD hours, salaries, fees, and indirect cost stepdowns by cost center;

- RN, LPN, attendant hours and salaries;

- base salary rates per hour for RNs, residents, and technicians;

- number of residents by approved residency program;

- salaries of teaching MDs, chiefs, and residents by type of residency program;

- legal and management changes by cost center due to C/N, licensing, or volume changes, including employee and MD hours, salaries, fees, and complementary costs;

- allocation bases for overhead cost stepdowns (e.g., square feet, pounds, gross revenues);

- balance sheet of assets and liabilities;

- revenues, expenses, profits (losses), cash flow, and accounts receivable--inpatient and outpatient;

- bad debts, emergency room deficits;

- malpractice insurance;

- depreciation, asset values, and leasing costs for land, buildings, fixed, major, and minor equipment;

- major movable equipment depreciation and leasing costs by cost center;

- decomposition of fringe benefits;

- utilization review and PSRO costs, hospital association dues, consulting fees; and

- total and average cost, basis for compensation, time on site and names for hospital-based MDs.

DRG statistics. To implement the new law requiring reimbursement on a case-mix basis, the most recent full year's worth of data on the diagnosis and treatment of each patient admitted to a short-term acute New Jersey hospital is computerized. From these data, 383 DRGs have been developed, based on ICDA codes, with and without surgery, with and without secondary diagnosis and patient age. Diagnostic data on each patient are linked with billing data to establish cost screens by DRG.[1]

Hospital Written Documentation. Each hospital file contains raw copy submissions by hospitals documenting and justifying proposed expenditures that are not determined to be presumptively reasonable. The file also includes a synopsis of the contested issue (e.g., excess radiological costs due to excessive testing) and the rationale supporting the rate analyst's final decision. None of these data are computerized, but they are readily available as case study material.

Health Planning Statistics. Because both the planning and CON divisions in New Jersey report to the same Assistant Commissioner as that for rate setting, rate analysts also have ready access to state Health Facility Plans. Generally, in cases where analysts have difficulties with high volume projections, they refer the cases to the planning department for review and comment. The planning staff is expected to corroborate or refute the need and/or feasibility of achieving targeted volume levels.

Rate Information. Once all SHARE forms are submitted, the analysts and clerical staff verify the numbers and transfer key data items to worksheets, which are then keypunched and computerized. Printouts of cluster and cost center frequency distributions, medians and challenge limits are made available to analysts in hard copy. These printouts rank all hospitals cost-wise for each cost center. A second computer program prints a revised worksheet (see Table 5) of last year's costs, base-period challenges, volume intensity allowances, economic factors, calculated reasonable costs, hospital budgeted costs, and questioned costs, all by cost center. These are also available in hard copy in the hospital's file.

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[1]Billing data have not yet been secured and computerized for all hospitals. For more details, see the section on developmental efforts.

TABLE 5: Example of Rate-Setting Worksheet--Level 1 Cost Centers (Calculated Budget - Nonphysicians)

FUNCTION	CEN-TER	BASE YEAR (1977) CIP COSTS	COMPUTATION OF 1978 ALLOWABLE COSTS						
			Base PD Challenge	Vol-Int Factor	Vol-Int Amount	Economic Factor	Calculated Reasonable	1978 CIP Budgeted	Costs Questioned
General Ancillary	CSS	$1,238,197	$ 0	.0254	$29,745	1.070	$1,356,697	$1,398,240	$ 41,543
	DEL	84,057	0	.0154	677	1.070	90,665	92,899	2,234
	EDG	116,406	0	.0354	2,455	1.070	127,181	129,276	2,095
	LAB	727,484	0	.0354	16,859	1.070	796,447	821,959	25,512
	ORR	509,609	0	.0154	4,004	1.070	549,565	561,479	11,914
	PHM	533,358	0	.0354	16,699	1.070	588,560	603,435	14,875
	RAD	414,512	0	.0154	4,108	1.070	447,923	469,413	21,490
	RSP	257,212	0	.0254	4,117	1.070	279,622	295,119	15,497
Total Ancillary		$3,880,835	0	.2031	$78,664	8.560	$4,236,660	$4,371,820	$135,160
General	A&G	$ 578,992	0	.0053	$ 0	1.070	$ 619,521	$ 629,626	$ 10,105
	DTY	1,031,321	0	.0053	4,740	1.070	1,108,585	1,137,319	28,734
	FIS	670,045	0	.0053	2,319	1.070	719,429	751,374	31,945
	HKP	567,963	0	.0053	0	1.070	607,720	619,440	11,720
	L&L	212,371	0	.0053	556	1.070	227,831	252,382	24,551
	MRD	164,496	0	.0053	460	1.070	176,502	197,256	20,754
	PLT	283,915	0	.0053	0	1.070	303,789	335,084	31,295
Total General		$3,509,103	0	.0371	$ 8,075	7.490	$3,763,377	$3,922,481	$159,104
Inpatient	ACU	$3,524,568	0	.0053	$ 9,893	1.070	$3,781,295	$3,856,637	$ 75,342
	ICU	399,680	0	.0053	1,089	1.070	428,822	447,339	18,517
	SAC	0	0	.0053	0	1.070	0	0	0
Total Inpatient		$3,924,243	0	.0159	$10,442	3.210	$4,210,117	$4,303,976	$ 93,859
TOTAL		$11,814,186	0	.2560	$97,181	—	$12,210,154	$12,598,277	$388,123

The analyst evaluates and transfers these and other cost data (e.g., special Blue Cross reimbursement provisions) to a final worksheet, on which he or she calculates the PAR. Ultimately, APRs, FARs, and FPRs are recorded on this sheet.

The data requested of hospitals in the SHARE forms and through the DRG case-mix and billing systems are comprehensive, but essentially all of the information is used in one way or another to set rates. Ancillary volumes and RVUs are used for interhospital cost comparisons; financial data on bad debts and emergency room deficits are used to adjust rates for legitimate losses; employee and MD hours, salaries, and fees are used to evaluate the legitimacy of departmental cost differences across hospitals; rates of pay per hour for MDs and residents are used for the same purpose; balance sheet, revenue, and profit data are used to evaluate the overall financial position of the hospital, particularly its shifting of costs to noncovered payors; DRG data are used to adjust admissions for legitimate differences in case mix.

Data collection does not appear to be a problem, since hospitals are legally required to submit both financial and DRG information, and the quality of the data submitted is apparently quite good. "Standard," or uniform, cost accounting following a very detailed set of cost definitions and appropriation methods is required. The data are generally complete and correct; otherwise, the budget forms are returned to hospitals for completion of missing items and recalculation. Virtually all of the data on the SHARE forms are computerized, since they figure either in the cost screens or analysis of noncomparable costs (e.g., depreciation). Delays in submitting budget data result in delays in setting new interim rates, which can have serious cash flow repercussions.

Appeals and Litigation

Appeals

As delineated earlier, the rate-setting process includes a detailed procedure for appeal. Of those hospitals that choose to appeal, the vast majority request a Hearing Officer meeting. But, after reconsideration, over fifty percent of the hospitals decide to accept the APR as their Final Administrative Rate (FAR) and cancel their meetings with the Hearing Officer.

The costs of the Hearing Officer meetings are shared by the Department of Health and those forty percent or so of the hospitals that do go to the Hearing Officer reviews. The Department pays the Hearing Officer $120 per hearing. A court stenographer is paid an hourly wage plus $.50 per page by the hospital for a transcript of the meeting. The hospital must also pay $65 for a representative of the Public Advocate's office to be present.

Five people are required to be present at a Hearing Officer meeting. Besides the Hearing Officer, they include the hospital's administrator and attorney, the rate-setting analyst, and the court stenographer. A representative of the Public Advocate's office is present during most Hearing Officer meetings. Any others are present at the request of the hospital involved.

There is a specific format laid out for the Hearing Officer to follow in conducting the review. First, the rate analyst presents the Department's position on a specific challenge; the hospital's attorney then may question the analyst. Then the attorney presents the hospital's refutation and calls witnesses to substantiate the hospital's claims. The Public Advocate and the analyst may then question the hospital. At this point, the hospital's attorney may challenge the analyst on either the presentation or any other grounds seen to be related to the hospital's case. The Hearing Officer has the right to interject and question the participants at any point. The whole process can take anywhere from two hours to six full days. Hearing Officers hold meetings two or three days a week from the beginning of September until April of the following year in order to hear petitions for adjustments to the current year's rates.

Upon completion of the meeting, the Hearing Officer has sixty days to issue a report of his findings and recommendations to the Commissioner. Copies of this report are sent to the hospital and the analyst involved. The hospital and/or the analyst may contest this report, in writing, to the Commissioner. The Commissioner then has the prerogative to sign either the Hearing Officer's statement as written or an amended version of the report. The FAR is then set as prescribed in the authorized recommendations from the Commissioner of Health. In the past, the Hearing Officer has generally tended to uphold the Department's position. Very rarely has the Officer granted the hospitals substantial increases in their per diems. In turn, the Commissioner of Health has upheld the decisions rendered by the Hearing Officer.

Hearing Officer meetings are backlogged more than a year. As of November 1, 1978, the day after budgets for 1979 were due to the Department of Health, forty-four hospitals had yet to appear before the Hearing Officer to appeal their 1978 rates. Nine more hospitals were awaiting the outcome of their meetings. Seven hospitals have yet to receive the Hearing Officer's recommendations on their 1977 rates, although the meetings finally have been held. Several hospitals are still requesting hearings on their 1976 and 1975 rates.

Hospital postponements and requests for additional hearings are the major reason for the delays, although rate-setting analysts sometimes ask for postponements as well. Most of these requests are granted in order to allow the participants to prepare further for the appeals. On occasion, Hearing Officers themselves have cancelled meetings. While the Commissioner

will immediately sign off on most decisions, several appeals for which Hearing Officers' recommendations were handed down up to a year ago have still not been decided by the Commissioner. These delays most frequently occur when hospitals make comments on or objections to the Hearing Officer's report. The end result of the delays has been to prolong substantially the final rate determination.

If, at some point, a hospital accepts a provisional rate as its final administrative rate, thus skipping over any of the intermediate review opportunities available to it, the hospital forfeits its right to later appeals. Therefore, many hospitals will file for detailed reviews and Hearing Officer meetings so that they do not lose their right to appeal in the future, which further contributes to the backlog of appeals to be processed.

Any further appeals of the assigned rate must go through the New Jersey court system. If, after receiving its Final Administrative Rate, the hospital is still dissatisfied with its assigned per diem, it may take the Department of Health to a hearing before the state's Appellate Court. The hospital may bring suit because of the rate-setting system, its criteria, and/or the actual rate established by the Department of Health.

The hearing before the Appellate Court is not de novo; that is, there are no witnesses or presentations of new evidence before the Court. The judge receives a transcript of the Hearing Officer appeal and a copy of the regulations and statutes governing the rate-setting process. The hospital's legal counsel is allowed to submit a brief on the facts and legal principles involved in the hospital's suit, to which the Department of Health responds through its attorney in the State Attorney General's office. Once the Appellate Court decision has been rendered, the hospital or the Department of Health may ask the Supreme Court of the State of New Jersey to review the case again.

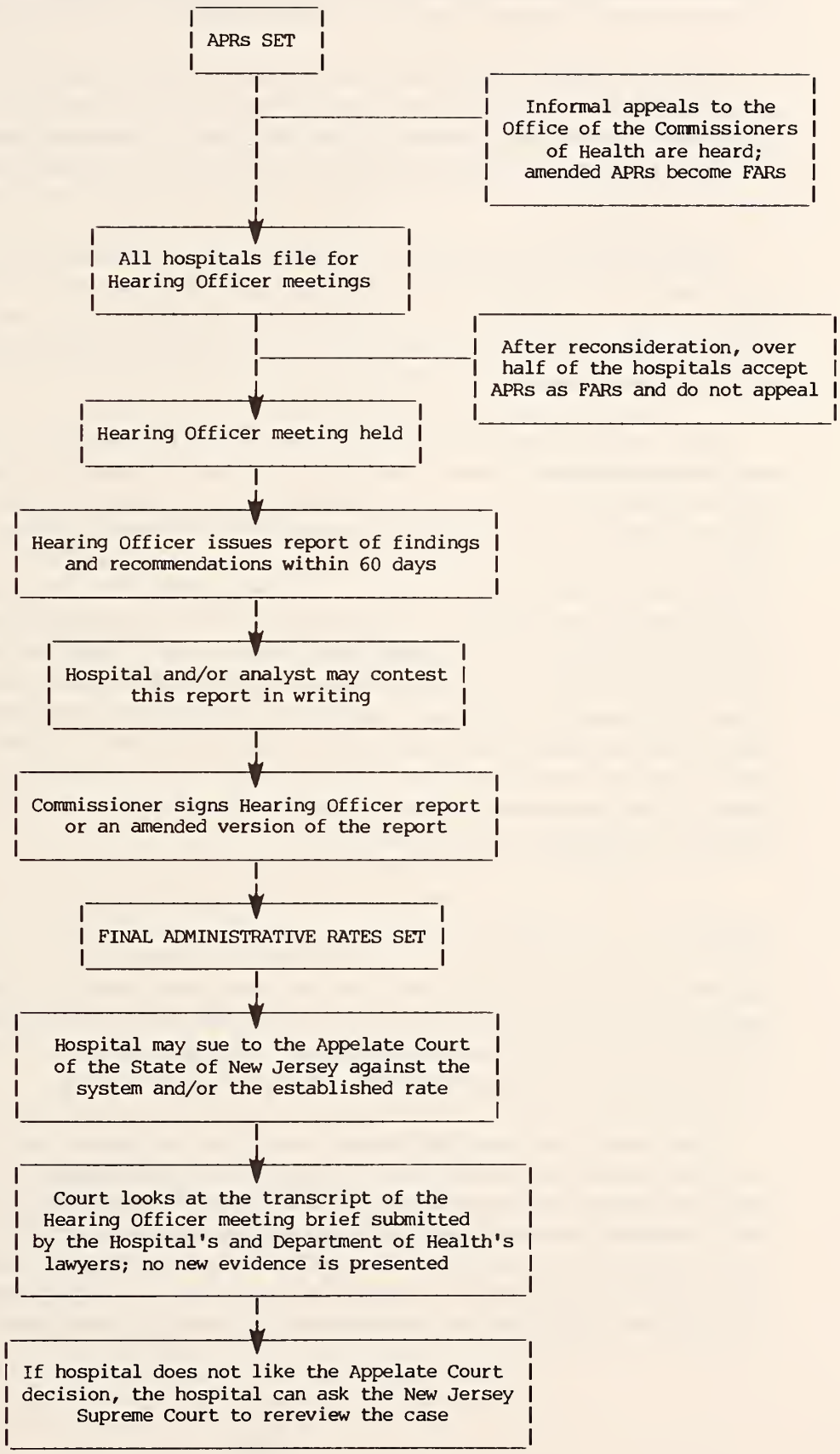
The appeals process is summarized in Figure 6.

Litigation

The number of rate-setting decisions appealed to the courts has been increasing over the past four years as the SHARE program has become more rigorous. Initially, budget review by the Department of Health was not particularly stringent. The hospitals received almost all of the increases they requested, and none of the state's hospitals appealed its 1975 rates to the courts.

The introduction of SHARE tightened up the process in 1976, and rates were not adjusted upward as readily as they had been in the past. Six hospitals took the Department to the Appellate Court. Two cases were

FIGURE 6: New Jersey Rate-Setting Appeals Process


APRs SET
Informal appeals to the Office of the Commissioners of Health are heard; amended APRs become FARs
All hospitals file for Hearing Officer meetings
After reconsideration, over half of the hospitals accept APRs as FARs and do not appeal
Hearing Officer meeting held
Hearing Officer issues report of findings and recommendations within 60 days
Hospital and/or analyst may contest this report in writing
Commissioner signs Hearing Officer report or an amended version of the report
FINAL ADMINISTRATIVE RATES SET
Hospital may sue to the Appelate Court of the State of New Jersey against the system and/or the established rate
Court looks at the transcript of the Hearing Officer meeting brief submitted by the Hospital's and Department of Health's lawyers; no new evidence is presented
If hospital does not like the Appelate Court decision, the hospital can ask the New Jersey Supreme Court to rereview the case

won by the Department of Health and one was lost. The last case was argued before the Supreme Court of New Jersey and has recently been decided in favor of the State. The other cases have yet to be decided.

Final Payment Rates have not yet been handed down for 1977 or 1978. Nevertheless, twelve hospitals have notified NJHA that they may take the Department of Health to court over their 1977 assigned rates. Estimates for 1978 indicate approximately the same number of hospitals going before the Appellate Court.

With the adoption of the global rate provision in the 1979 SHARE guidelines, the Department is hopeful that the number of court challenges will decline. Close to fifty hospitals accepted their assigned global rates at the beginning of the year, thus avoiding year-long negotiations with the Department of Health.

The resolution of two key 1976 rate-setting cases by the New Jersey court system should have an important effect on future rate reviews and future appeals. In question was the legitimacy of peer comparisons among hospitals, which is the foundation for setting rates under the SHARE system. The hospitals involved were William B. Kessler Hospital and Elizabeth General Hospital. In compliance with the Department of Health's accreditation standards, which mandate licensed physician coverage either on-site or on-call to an emergency room at all times, William B. Kessler Hospital in Hammonton, New Jersey employed a full-time physician in the hospital's emergency room. However, Kessler's ER averaged only one visit per hour. The analyst felt that this was much too low a level of service, especially in comparison to similar small, rural acute-care hospitals in the state. The analyst disallowed the salary costs of the physician and set Kessler's per diem rate accordingly.

The analyst also disallowed the costs of around-the-clock nursing coverage in the hospital's nursery for the same reason; the small number of deliveries performed yearly at Kessler did not warrant maintaining on the payroll full-time nurses who covered only the nursery. Upon appeal, the Hearing Officer concurred and the Final Administrative Rate was set minus the physician's and nurses' salaries. Kessler Hospital took the case to the New Jersey Appellate Court.

The basis for Kessler's suit was that the hospital, in order to maintain its standards for accreditation, was required to have the emergency room physician and the nurses on the staff. The hospital felt that the Department was unreasonable to require certain staffing levels yet not be willing to set its reimbursement rate high enough to cover the costs of the necessary personnel. On the other hand, the Department contended that a full-time physician in the emergency room was unnecessary because Kessler

could keep its ER functioning with physicians on call, as did the other hospitals in its peer group. Also, the state felt that nursery services were not essential to Kessler Hospital and that they could be dropped with no adverse effects.

The court ruling reversed the Department of Health's findings and allowed all costs, saying that, given the prescribed accreditation requirements, the state must allow the hospital to pay for the necessary staff. The judge also ruled that Kessler Hospital could not be compared to the other hospitals cited as standards in the state's case. Although they were all small, rural hospitals, the judge felt that they were in no other way comparable.

By ruling that the state could not deny hospitals the salary costs of personnel mandated by accreditation standards, the judge would have given the hospitals total discretion in decisions about inputs. In effect, the ruling, by giving hospitals essentially complete control over the use of inputs and by questioning the validity of interhospital comparisons, would have seriously undermined the SHARE system, had it been allowed to stand.

Upon receiving the Appellate decision, the Department petitioned the Supreme Court of the State of New Jersey for another review of the case. In its decision, the Supreme Court overturned the Appellate Court's ruling and once again upheld the Department of Health's position. The Justices agreed with the rate analysts that Kessler could establish a plan for physician coverage without twenty-four hour staffing of its emergency room and still be in compliance with all departmental regulations. Hospital administrators had argued that, due to the location of their facility, this coverage system was impossible. The Court disagreed and remanded establishment of the details of the system back to the Department for further consideration by its rate-setting "experts."

The Supreme Court also upheld the use of peer comparisons in the analysis of hospital budgets. Considerable flexibility in the use of the peer comparison mechanism as a rate review tool was also supported. While acknowledging that no two hospitals are identical, the Court found that to specifically identify the differences existing among the hospitals in a peer group would unnecessarily complicate the process. Since peer comparisons are the foundation of budget review under SHARE, the Court decision was an important victory for the Department of Health. In addition, the matter of the newborn nursery center costs was also decided in favor of the Department. This point was not strongly contested; before the Court's ruling, Kessler Hospital had already eliminated the use of the newborn nursery due to underutilization.

Similarly, the administrators at Elizabeth General Hospital had hoped to use the Kessler ruling as a precedent for their case against the Health Department. The Hospital's suit contested Department challenges to four cost centers: physical therapy, radiology, education, and anesthesiology. Elizabeth General Hospital had a problem similar to Kesssler's, having too low a level of service to justify a full-time employee's salary. Specifically, the hospital had at least one nurse anesthetist in-house around the clock to cover the delivery room. However, rate-setting analysts judged its delivery rate to be too low relative to the delivery levels at comparable hospitals in New Jersey.

Again, the legality of peer comparisons was called into question. The resolution of the Kessler Hospital suit in favor of the Department, while not used as an absolute guideline, allowed the Court to rule against Elizabeth General's claim of "uniqueness" and to remand the issue back to the rate setters for further study. The justices also upheld the Department's position regarding the other three cost centers.

The focus of a third important case, the Medical Center at Princeton suit, is on the "Administration and General" (A&G) cost center guidelines. The hospital is not contesting the usefulness of peer comparisons but rather the reasonableness of the standards used for these comparisons. Currently, A&G costs are allocated per patient day. Medical Center officials contend that this standard favors those hospitals with a longer average length of stay and unfairly penalizes those facilities with more admissions and shorter lengths of stay. They prefer another standard, such as administrative costs per admission, which is used in the setting of per diems. The Department of Health has argued that length of stay is not correlated with A&G costs in other hospitals. As in other cases, the Court put the burden on the Medical Center at Princeton to prove that this correlation exists. Arguments have been heard and a decision by the Court is pending.

If the Court does rule against the Department of Health, then the Department will be forced to significantly alter the standards by which per diems are set. One possible implication is that past rates would have to be recalculated, possibly requiring the award of millions of dollars to hospitals throughout the state.

New Legislation

In mid-1976, Commissioner of Health Joanne Finley met with persons on Governor Byrne's council staff to discuss proposed changes in the rate-setting authority that would expand the scope of its responsibility. Any bill initiated by a Department within the state bureaucracy in New Jersey and incorporating such changes must be given to the Governor's office for clearance. If the bill is acceptable and compatible with the Governor's policy, it is forwarded to the legislative leadership or to an appropriate sponsor to be introduced and assigned to a committee for hearing.

Such was the case with Senate bill 1454. Sponsored by a liberal Democrat, S1454 proposed to extend the rate-setting authority to encompass all payors. However, it included neither provisions for a commission to oversee the rate-setting authority, nor allowances for indigent care cost. Public hearings were held on the bill, during which sentiment ran strongly against expanding the Department of Health's mandate to set rates. Blue Cross and the New Jersey Hospital Association (NJHA) led the fight against S1454, and the bill died in committee in the fall of 1976.

After the defeat of S1454 and the reelection of Governor Byrne in 1976, Department of Health officials realized that they had to work with the Hospital Association in order to reach a satisfactory compromise. The two groups met on several occasions between November 1977 and January 1978 to discuss their objections to the previous bill and to suggest a new proposal that they could present to the Governor and the legislature together.

While agreeing that coverage of rate setting should extend to all payors, NJHA and the Department of Health disagreed on two logistical issues. First, the Hospital Association did not want rate setting controlled by one person; it wanted the Commissioner's power diluted by the formation of an independent Commission to oversee the setting of rates. The Department, while agreeing in principle to the idea of a Commission, would not have it detached from the Department of Health or the Certificate of Need program and the other licensing functions. Second, the NJHA wanted allowable costs more broadly defined. Inner-city hospitals, which had the highest proportions of indigent and charity cases, were clamoring for some relief from these costs. Previously, indigent costs were disallowed under rate setting and hence passed on to self-pay patients and those covered by commercial insurors. Counties in the state had also been forced to pick up some of this debt. Provisions for dealing with the costs of indigent care had not been included in S1454, but city hospitals were demanding that they now be written into the bill.

A tentative agreement on both points was reached between the Association and the Department, and a compromise measure, S446, was submitted to the legislature. The Governor, who had once served on the Public Utilities Commission, supported the formation of a similar commission to oversee hospital rate setting and so came out strongly for S446. The Hospital Association seemingly concurred with key elements of the bill. However, when the first of four public hearings was called, the NJHA unexpectedly presented its own proposal for an independent commission, but lack of a sponsor and Republican support for its alternative legislation led the Hospital Association to drop this proposal. Instead, it went to work on changing parts of S446. It lobbied for taking the Commissioner of Health off the Commission and expanding the Commission from the proposed three to five members. NJHA wanted the Rate-Setting Commission to be able to

set its own regulations and guidelines and also wanted an exact definition of revenues and costs spelled out in the law.

Meanwhile, Blue Cross officials, seeing that extended coverage was inevitable, fought to retain some of their preferential status. Proclaiming that it was going to go bankrupt, Blue Cross insisted that a companion bill be tied to S446 if Blue Cross were ever to support it. The amendments to the state insurance code, sponsored as S419, proposed a guaranteed Blue Cross contingent surplus averaging five percent of the net premium income it received during the year. (This was eventually lowered on the Senate floor to two and a half percent.) Allowances in the law would enable Blue Cross to experience rate groups as small as 50 rather than 100 employees. Also, claims costs and utilization trend factors would be included in these rate formulas. The Senate leadership committed itself to sending S419 and S446 to the legislature simultaneously and to arrive on the Governor's desk at the same time.

The Committee, throughout the hearings, was surprisingly unconcerned with the cost of the legislation. Department officials assured the Committee that they intended to use their existing analyst staff and that they might require only a few additional clerical personnel.

In the end, the Department of Health prevailed. The schism that had developed in the Hospital Association over the question of indigent care costs kept NJHA from presenting a strong and united opposition to the measure as it had in the past. Blue Cross officials, seeing the internal strife at NJHA and realizing that they had opposed a considerable amount of regulation during the year, held back on their opposition to S446. Instead, they concentrated their efforts on getting compensatory relief through S419.

Senate bill 446, as it came out of the Committee, allowed for a five-member commission, including the Commissioners of Health and Insurance, two consumer representatives, and one person with experience in hospital administration or finance. The measure was passed in May 1978, along with S419. Through its key provisions, which are inclusion of all payors into the regulatory system, inclusion of indigency costs into the rate base, and creation of a rate-setting commission, S446 promises to produce significant changes in the New Jersey rate-setting process. At present, task forces are working to establish guidelines for implementing the provisions of the legislation; one comissioner has already been appointed. Although implementation is slated to take place during 1979, the timing may be delayed somewhat due to the controversy surrounding the changes mandated.

Program Cost

The hospital rate-setting process in New Jersey is funded by both state and federal sources. Developmental work has been federally funded and is primarily the responsibility of a state development project staff. While the project staff is both organizationally and administratively separate, there is some interchange between it and the SHARE staff. The Director divides his time among all HES activities, including the developmental work.

Because of the integrated organizational structure of planning, and particularly because of the range of responsibilities now carried out by HES, it is difficult to extract the precise administrative costs associated with SHARE. Health Economics Services now administers hospital and nursing home rate setting, the DRG experiments, CON financial feasibility, and a new training and audit program. Some of the expenses incurred by the Department of Health in setting hospital rates, and most incurred in setting nursing home rates, are picked up by the state Medicaid program under the terms of an interagency agreement. Total program costs, including all state funds but excluding the federal share, amounted to $940,000 for fiscal 1979, of which more than half ($515,000) was allocated to hospital rate setting. This amount excludes strictly administrative costs, totalling approximately $100,000 that were unallocated by function. Also excluded are amounts attributable to staff time spent on hospital rate setting outside HES.

Because of the increase in the scope of HES jurisdiction, its budget and staff have grown continually since the Department took over the rate-setting function in 1974. Although historical budget data were not readily available, Table 6 presents data on HES staff size and composition since the inception of the state-administered program.

TABLE 6: Number of Personnel in Health Economics Services, FY 1975-79

	FISCAL YEAR				
TYPE OF PERSONNEL	1975	1976	1977	1978	1979
Coordinators	1	1	1	2	2
Professional staff:					
Hospital rate analysts[1]	9	13	28	33	33
Nursing home rate analysts	-	-	2	4	4
Development project staff	-	2	5	16	16
Clerical	2	4	7	16	16
Total	12	20	43	71	71

[1]Includes analysts and supervisors and, in later years, CON financial feasibility analysts and training and audit staff.

Developmental Efforts

Under the new legislation, a novel approach to hospital rate setting will be phased in over the next several years. In essence, this approach ties payment rates directly to case mix through so-called Diagnosis-Related Groups (DRGs). The purpose of the change is to reflect a public utility concept of rate setting, which bases rate differences on outputs rather than inputs, a change hospitals have been requesting for years. Below is provided a brief summary of the approach.

The underlying assumption of the DRG technique, called the AUTOGRP Patient Classification Scheme for Length of Stay, is that relative hospital stays are reasonably good proxies for the severity of illness and the level of resources required for diagnosis and treatment. The Department of Health defines DRGs as "patient case-mix groupings designed to be both medically meaningful and similar in hospital resource consumption (measured by patient days or dollars)." Five independent variables, including primary and secondary diagnosis, principal and secondary operative procedure, and age, were used to explain differences in lengths of stay for eighty-three major diagnostic categories across all New Jersey hospitals for 1976-77. The eighty-three original groups were decomposed into 383 DRGs, based on significantly different lengths of stay by cluster of independent variables. For example, the broader category, diseases of the pancreas, was decomposed into two groups, patients with and without surgery, to reflect significant variances in lengths of stay. Other illnesses were further subdivided by age or secondary diagnosis when the variance in length of stay could be further reduced, giving 383 "unique" disease categories in all.[1]

Once diagnostic groups are formed, costs must be appropriated to each of the 383 DRGs. Inter alia, this requires uniform accounting across institutions to ensure that the data base used to allocate costs is consistent and exhaustive. The first step in the process is to allocate certain nonbilled overhead costs to cost centers whose activity varies directly by case mix. Housekeeping, laundry, and central and sterile supply, for example, may fluctuate with case-mix, but primarily through the ancillary and nursing units. This allocation is done by first determining relative use of ancillary and nursing units by each of the 383 DRGs. "Measures of Resource Use" are calculated for this purpose. First, for ancillary departments, patient bills are merged with patient medical records, thereby linking charges to case mix and ancillary tests and procedures. Average ancillary "costs" are then calculated for each of the 383 DRGs. As charges do not necessarily equal costs by department, the ratio of charges to charges applied to costs (RCCAC) is used to adjust for differential markups. This way, the "costs" of fifteen ancillary departments are proxied using charge-to-charge-to-cost ratios. Thus, ancillary costs vary over the 383 DRGs.

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[1]A separate algorithm was used for a small (1.8 percent) group of outliers exhibiting extremely long lengths of stay.

Another measure of resource use, called the Relative Intensity Measure (RIM), is used to allocate nursing services across DRGs. These RIMs were developed subjectively by nursing staff from a sample of hospitals. The expert nursing panel, using a sorting technique that approaches the problem sequentially, ranked each of the 383 DRGs in terms of their relative use of nursing inputs. The rankings were consciously designed to reflect actual input levels for typical patients (of a particular DRG) on a typical day. An interval scale was next determined from the ordinal rankings by further requesting the panel to select twenty diagnoses (one in each of twenty groups ranked from low to high intensity) and compare them in an absolute sense (e.g., DRG 186 was three interval units greater in intensity than DRG 190). Using average nursing costs across a sample of New Jersey hospitals, the interval scale was converted to a dollar scale using patient days by DRG as weights. Thus, a separate nursing cost for each of 383 DRGs can be determined.

Finally, measures of resource use were calculated for several general services directly supporting patient care, i.e., dietary, housekeeping, laundry, and medical records. The allocation schemes were generally derived from special studies of patient requirements by diagnosis, again for each of 383 DRGs.

A set of institutional, nonpatient costs (e.g., administrative and general services and malpractice insurance) are calculated separately by the hospital and then added onto the DRG rate. These costs are estimated using a regression of institutional costs on total patient care costs and the number of approved residency positions (to capture education costs). The coefficients of the equation ($R^2 = .94$) allow hospitals approximately $.27 of institutional costs for every $1.00 of direct patient care costs, and $19,111 for every approved resident. Depreciation, interest, and lease costs not explicitly accounted for in particular ancillary services such as lab and radiology are added to institutional costs more or less as a pass-through.

An overall per diem rate for individual hospitals is calculated as a weighted sum of the projected number of patients in each of 383 DRGs times the mean allowable DRG cost. DRGs with greater cost dispersion are allowed greater cost variation. Institutional and capital costs are added to case-mix-specific DRG costs, total inpatient days are projected, and a per diem is calculated.

The Department of Health has not yet stated its intention to implement the DRG-based reimbursement system. It is anticipated that, following publication of the initial DRG reimbursement standards, the program will be implemented, initially on a voluntary basis.

INTERACTIONS

The following section describes the impact of the New Jersey system on the various payor groups--mainly Blue Cross and Medicaid--as well as the role each plays in the process. The interactions of the regulatory system with other key agencies and organizations, including the Hospital Association, Department of Insurance, the legislature, the planning and Certificate of Need processes, and the hospital workers' union, are subsequently described.

Payor Groups

Blue Cross

Blue Cross has played an integral part in the hospital regulatory scene in New Jersey for a number of years, although its role has been mostly indirect. It has been continuously regulated by the state Department of Insurance, which has jurisdiction over its premium rates, payment rates to hospitals, income, benefit packages, and Board composition. Its premium rates, more than anything else, have been the focus of concern over rising hospital costs in the state, and requested increases provided the catalyst for the initial cost containment efforts. In addition, as the major nongovernmental third party payor, as well as one of the two fiscal intermediaries for Medicare and Medicaid, Blue Cross processes claims for most of the inpatient hospital care in New Jersey.

Since 1953, Blue Cross has maintained a contract with the state's hospitals, whose provisions, which are common to all hospitals, define the principles of reimbursement to hospitals by Blue Cross, including elements of allowable cost. Reimbursement is cost based for inpatient services and charge based for outpatient services. Because of its unique, legislated status as a nonprofit hospital service corporation, Blue Cross activities have always been regulated by the Commissioner of Insurance. In New Jersey, Commissioners of Insurance have historically been relatively aggressive in protecting Blue Cross subscribers by holding down premium rate hikes. Table 7 presents historical data on premium rate increases requested by Blue Cross as compared to the increases approved by the Department of Insurance. While the data indicate that approved rate increases have always fallen below the amounts requested, the disparity has widened considerably since 1975. Thus, concurrent with the implementation of the SHARE system, the Commissioner of Insurance began approving rate increases that were far below those requested by Blue Cross, despite the fact that Blue Cross outlays to hospitals were almost entirely state regulated under the provisions of the 1971 planning legislation.

The Department of Insurance has also historically had the authority to regulate Blue Cross payment rates to hospitals. Beginning in the late

1960s and ending in 1974, the Department was very active in setting Blue Cross payment rates, utilizing the HRET budget review system for rate determination.[1]

In the political arena, the focus of Blue Cross concern has been its competitive position relative to commercial insurors and its financial solvency. Blue Cross was the primary mover behind the rate-setting provisions of the 1971 planning legislation, believing that responsibility for controlling costs within the industry should belong to the state rather than be borne by one payor. During the consideration of S446, details of which are described in the preceding section, Blue Cross was concerned about loss of business to commercial insurors as a result of the equalization of payment rates; it also feared financial insolvency would result from the

TABLE 7: Premium Rate Increases Requested by Blue Cross and Those Approved By the Department of Insurance, 1956-1977

	PERCENTAGE INCREASE IN PREMIUM RATES	
DATE OF RATE FILING	Requested by Blue Cross	Approved by Department of Insurance
November 1956	27.6	17.1
July 1958	28.2	18.5
January 1960	18.1	15.1
September 1962	29.3	19.9
August 1964	32.6	18.1
October 1965	23.5	12.9
December 1969	44.3	28.5
May 1970	35.2	21.9
July 1971	18.4	9.6
May 1972	14.3	no approval
January 1973	18.1	5.0
September 1975	29.8	24.7
March 1976	29.1	5.0 (interim)
June 1976	29.1	7.23
April 1977	19.1	7.2

Source: New Jersey Blue Cross

effective separation of authority for establishment of payment rates to hospitals and for approval of premium increases. To address these concerns, S419 was introduced and passed as a companion to S446; the bill gave Blue Cross the authority to experience rate certain types of policies and also allowed for a two and one-half percent contingency reserve.

[1]The evolution of the HRET system is described in the first section of this case study.

Blue Cross, therefore, has been active in the regulatory process, but its role has been determined by the state government. In the past, it seemingly was unwilling to bear the entire burden for containing hospital costs and lobbied to increase the power of the state to regulate hospital rates. Currently, it benefits financially from controls on its payment rates under the SHARE system, yet it feels vulnerable to a financial squeeze due to the separation of authority for rate setting and approval of premium rates.

The provisions of the Blue Cross contract have significantly influenced the shape of the SHARE system. For example, the elements of cost recognized by the state are currently the same as those recognized by Blue Cross. Under the SHARE system, payment rates are set for Blue Cross and Medicaid. Blue Cross rates will be slightly higher due to the inclusion in the rate of costs that are not reimbursed by Medicaid, namely, the Emergency Room deficit and an allowance for fees of fee-for-service radiologists. By statute, Blue Cross is required to pay the rates established by the Department of Health.

The most direct involvement Blue Cross has in the SHARE system is its auditing function. Blue Cross audits year-end cost reporting forms, not only for its own business, but also for Medicare and Medicaid in its role as fiscal intermediary. The audited cost reports are then forwarded to the Department of Health, which then must relate the information in these reports to that on the SHARE forms, since their formats are incompatible. The audited cost reports are used to verify cost data reported on SHARE budget forms.

Medicaid

Unlike most of the other Northeastern industrial states, New Jersey has taken a relatively conservative approach toward the Medicaid program. The New Jersey program began January 1, 1970 and was thus one of the last to be implemented; it covers only the categorically needy (i.e., the aged, blind, disabled, and families with dependent children) and does not cover the so-called medically indigent population. Medicaid expenditures for fiscal 1979 are expected to total slightly over $600 million, half of which will come from federal funds; the other half will be financed by state sources. The Medicaid program in New Jersey has not been the focus of controversy that it has been in other states, where expanding eligibility and budgetary inflation are at issue. Medicaid in New Jersey is also generally considered to be a cohesive program with a history of competent directors.

Since the program began, few changes have been made either in scope of coverage or in eligibility provisions. Hospital services covered under the program have remained the same. Payment procedures, however, changed for a brief period during fiscal 1976, when it was determined that there

would be a budgetary shortfall of approximately $24 million. To address this problem, reimbursement rates to most providers were cut back for the six-month period from January to June 1976.

As part of this attempt to cut back Medicaid spending, it was announced that, effective January 1976, a limit of 6.7 percent would be imposed on hospital rate increases. The industry took the case to court on procedural grounds, arguing that imposition of such a ceiling would require negotiation of an agreement with the Secretary of HEW, and that such an agreement had not been obtained. In May, the court decided in favor of the hospitals. Following that decision, the Director of the Medicaid program and the Hospital Association negotiated an agreement whereby the limited rates would continue to be paid on an interim basis through June 30, 1976, but the hospitals would receive the difference between those rates and the amount owed them under federally determined Medicaid reimbursement principles only upon audit of their year-end cost reports. Thus, full payment was made to the hospitals, but part of the amount was delayed.

According to the Attorney General's interpretation of the 1971 planning legislation (Chapters 136 and 138), the Medicaid program is exempt from the rate-setting provisions. In other words, there was (and currently is) no statutory requirement that the state Medicaid program abide by the rates determined within the Department of Health. Since it was first implemented, however, Medicaid has been paying interim rates as established first under the HRET system and then by the Health Department. Currently, Medicaid is paying rates promulgated under the SHARE system under the terms of an interagency agreement.

The Medicaid per diem rate calculated under the SHARE system includes no add-ons and excludes all bad debts; it is thus calculated as the covered inpatient portion (CIP) less bad debts (specifically, the Emergency Room deficit). The Department of Health notifies both Medicaid and the fiscal intermediaries by memorandum each time a rate is established or changed for each hospital, and those rates are implemented (or retroactive adjustments are made) upon receipt of the memo.

Medicaid seldom questions the rates handed down by the Department of Health. There is no formal process within the program administration for reviewing the rates, and, although Medicaid is involved in a limited way in the policymaking process within the Department of Health, it has virtually no direct involvement in establishing payment rates to hospitals. On a few occasions, Medicaid has reduced the rate set for a particular hospital, but this very rarely happens.

The rates established by the Department of Health serve as the basis for interim payments to hospitals, reimbursing them for inpatient services provided to Medicaid patients. Approximately four months after the close of the fiscal year, hospitals submit a Form 2552 cost report to the fiscal intermediary. The 2552 identifies the share of total hospital costs attributable to Medicare and Medicaid patients. At about the same time, the hospital submits an actual cost report to the Department of Health in the SHARE format. The two reporting formats (i.e., the 2552 and the SHARE report) are very different. The final settlement with the hospitals adjusts the bottom line Medicaid dollars by the overspending ratio computed under the SHARE system. More specifically, the total amount paid to the hospital during the fiscal year is computed as follows:

$$\text{Total Medicaid Reimbursement} = \frac{\text{Gross dollar amount approved by SHARE (after pass-throughs and volume adjustments)}}{\text{Actual dollars spent during the year}} \times \text{Total costs for Medicaid patients as identified on Form 2552}$$

The application of the overspending ratio to the actual Medicaid costs thus places a cap on total reimbursement to hospitals under the program.[1] Use of the ratio assumes that hospitals overspent on Medicaid patients in the same proportion as they overspent on non-Medicaid patients. When the total reimbursement amount is computed, the difference between that amount and the actual amount paid to the hospital is calculated. That difference--whether it be owed to the hospital or to Medicaid--is frequently made up as a lump sum payment, although if it is owed by the hospital, the intermediary may take it back by temporarily lowering subsequent per diem rates. There is no rate-setting mechanism for outpatient hospital charges, and interim Medicaid payments are made on the basis of hospital charges. Again, at the end of the fiscal year, outpatient costs for Medicaid patients are allocated, and the program pays the lower of total costs or total charges. Almost uniformly in New Jersey, total charges are greater than total costs, so the program reimburses hospitals for their costs.

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[1]No matter what the value of the ratio may be, Medicaid will never pay more than the total amount identified on Form 2552.

Payors Outside the System

At present, three sets of payors are not incorporated into the SHARE system: Medicare,[1] private insurance plans other than Blue Cross, and self-pay patients. None of these payor groups was covered under the 1971 legislation and none is directly affected by SHARE. Recent legislation (S446), however, mandates the uniformity of payment for all payors, and its implementation should end the existing payment disparities among the various payors, although several critical and controversial issues remain to be settled before the law can go into effect.

Other Agencies and Organizations

Hospital Association

The New Jersey Hospital Association (NJHA) has been an active participant in hospital cost containment programs although, since the locus of authority for rate setting has shifted to the Department of Health, its role in the process has changed substantially. The NJHA represents all New Jersey hospitals. In exchange for dues, the hospitals receive representation of both their collective and individual interests before government agencies, as well as certain financial management services. The Association itself consists of several separate corporations. In addition to the parent organization, which is involved primarily in planning, lobbying, and financial management activities, other corporations have been formed that provide services to individual hospitals (the Shared Service Corporation), community education and utilization studies (Hospital Research and Educational Trust, HRET), malpractice insurance, and administration of a pension and insurance fund.

The Hospital Association's initial involvement in the rate-setting process seems to have been an outgrowth of its attempts to protect the interests of a group of hospitals that had been consistently hurt by the ceiling set by the Commissioner of Insurance on per diem rates paid by Blue Cross. Since it became clear only after the fact that these hospitals had consistently surpassed the ceiling, given the retrospective cost reimbursement system then in effect, the Association contended that a more

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[1]New Jersey has never obtained a waiver from the federal government to be exempted from federal cost reimbursement requirements for the Medicare program. There are plans to seek such a waiver in the near future as S446 and the DRG-based reimbursement experiment are implemented. Up to now, therefore, Medicare has reimbursed hospitals in New Jersey according to its own reimbursement principles. Anecdotal evidence indicates that hospitals in the state have not been hurt by the caps imposed under Section 223.

prospective system would give the high-cost hospitals a better basis from which to plan and manage. From the late 1960s until the shift to the Department of Health in 1974, budget review was performed by analysts within the HRET. A private publication, Bureaucratic Malpractice, and a new administration brought about an end to the direct involvement of HRET in budget review and rate setting. The transition from HRET to the Department of Health was abrupt; those in charge of implementing rate regulation within the state government apparently had determined that the break would be complete.

The Hospital Association's involvement in the SHARE system has thus become considerably less direct; its role has shifted to one of providing support to individual hospitals in the form of consultation during preparation of budget documents and presentations at analyst reviews, as well as advocacy of their collective interests before the Department of Health. The NJHA also becomes involved in "class action" types of litigation, where the grounds for the lawsuit pertain more to general program principles or procedural matters than to particular hospital grievances. In the latter cases, its role is minimal.

There is no formal interaction between the NJHA and the Department of Health; there is no ongoing data exchange, and the NJHA is not represented on the HCAB, although some hospital administrators and trustees are on the Board. There is, however, considerable interaction on a more informal level. As was noted earlier, the Association is directly involved in the budget review and appeals process. It also represents the industry in the formal policymaking process, for example, by attending HCAB meetings or testifying before legislative committees. The NJHA is also brought into the process by the Department of Health, which recognizes both the political power of the Association and the benefits of avoiding open conflict that could damage the program. By listening to the views of the industry and making some concessions to accommodate it, the Department believes it can better preserve an effective program than if it were to close the industry out entirely and risk increased industry recalcitrance or crippling lawsuits. The NJHA is thus asked to participate in various Departmental policy committees, such as the one currently meeting to determine how indigency costs will be defined for reimbursement purposes. The Assistant Commissioner also attends meetings of the NJHA Council on Reimbursement (which advises the Governing Board on reimbursement issues). Finally, before S446 was introduced, extensive negotiations were held with representatives of the NJHA in an attempt to resolve Department of Health/hospital industry differences before the bill was sent for consideration by the legislature.

The NJHA has acted and continues to act as spokesman for the New Jersey hospitals as a group. Often, however, the hospitals disagree on particular policy issues, and factions are created within the Association. One of the more outstanding examples of divisiveness within

the NJHA related to industry support of S446. The Association was inclined to oppose the bill, believing that it gave too much power over hospitals' financial conditions to the Commissioner of Health. Of predominant concern to urban hospitals, however, was reimbursement of indigency costs, which under existing law or contract could not be subsidized by Blue Cross, Medicare, or Medicaid. Hospitals were therefore forced to finance these costs through increased charges to commercial insurors and self-pay patients. For many of these urban hospitals, payment of indigency costs could not be adequately compensated for, and losses were being incurred. For these hospitals, which formed a so-called "urban coalition," third-party coverage of indigency costs (which would result from extending Health Department jurisdiction to all payors) was far more important than the other disputed provisions in the bill, such as the independence of the Rate-Setting Commission. A battle thus erupted between the urban and suburban coalitions over the NJHA stance on S446, with urban hospitals threatening to withdraw their support from the Association if it did not support the bill. It seems likely that the Association's willingness to negotiate the provisions of S446 and their ability to reach an acceptable compromise were a direct result of the urban hospital coalition's commitment to its position.

Department of Insurance

It was noted at the outset that the initial impetus for hospital cost containment came from the Department of Insurance (DI) in response to premium increases requested by Blue Cross. With the passage of the 1971 planning legislation, the Department of Health was made a full, if not unequal, partner in the cost containment effort at the state level. Legislation passed in 1978 (S446) completed the phasing out of the DI's role in hospital rate setting, although it has retained the authority to approve Blue Cross premiums and rates paid to hospitals by Blue Cross. The Department of Insurance questions the wisdom of this separation of authority, since premium rates are largely a function of outlays paid by Blue Cross to hospitals, which are based on rates set within the Department of Health.

The DI's interest has historically been the containment of costs for Blue Cross subscribers. This interest motivated its early participation in voluntary cost containment programs as well as the HRET system. Because of this more limited objective (i.e., protecting Blue Cross subscribers), the Department tends to object to the use of Blue Cross premiums as a form of tax revenue for achieving certain public policy objectives. It objects, for example, to the use of Blue Cross premiums to subsidize unproven delivery systems or alternatives to conventional acute care (such as preventive medicine). More importantly, the Department objects to the widespread subsidization of indigency by Blue Cross subscribers. In the current round of negotiations over the coverage of indigency costs, the DI will argue for the imposition of caps on the amounts of bad debts covered by the various payors.

Since the authority for hospital rate setting shifted to the Department of Health and the SHARE system was developed and implemented, the DI has felt totally removed from rate-setting activities. Due to the lack of staff and technical resources within the DI, as well as to the perceived complexity of the SHARE system, the DI, in effect, rubber stamps its approval of rates paid to hospitals by Blue Cross. Its stance on premium rate increases continues to be tough, however, and this has led to concern by Blue Cross about its financial position. This concern found its way into legislation (S419), which provided additional safeguards for Blue Cross.

Legislature

Within the legislature, jurisdiction over hospital rate-setting activities is exercised by two standing Committees: the Institutions, Health and Welfare Committee and the Joint Committee on Appropriations. Both the Senate and the Assembly have Institutions, Health and Welfare Commitees, which have jurisdiction over a wide range of functions, including health programs, Medicaid, social services, corrections, and veterans' programs. There is little or no routine interaction between these Committees and the Department of Health; interaction occurs only when legislation is being considered that would affect a function within the purview of the Committees. There was considerable interaction with the Department of Health during the consideration of S446, much as there had been during consideration of the 1971 planning legislation. There is no ongoing monitoring or evaluation of functions within the Department of Health by the Committee, and high turnover (both within the legislature as a whole and on the Committees themselves) precludes any continuity of interest or oversight by individual legislators.

The Joint Appropriations Committee is responsible for approving the state's budget each year, once it has been recommended by the Governor. Departmental budget submissions are "zero-based"; that is, the Commissioner of each department indicates the programs to which the individual departments desire to provide the first dollars appropriated, and so forth, until all of the previous year's appropriations have been exhausted. In the event that additional funds are appropriated, their proposed allocation is also specified. In the absence of specific changes by the Governor or legislature, passage of the budget reflects tacit approval of the priorities reflected in the submissions.

The FY 1980 budget submission from the Department of Health provides evidence that the Commissioner of Health places a high priority on hospital rate setting, since a substantial increase over the FY 1979 budget for Health Economics Services was included in the 1980 budget request. In

other words, even if the Department received the same appropriation in 1980 as it did in 1979, the Commissioner would want to increase the amount allocated to HES. Since its creation, Health Economics Services within the Department of Health has not encountered any serious opposition during the appropriations process.

Aside from the ongoing involvement of the standing committees, individual legislators occasionally become concerned with hospital regulation when it has a tangible impact on their constituents. Recently, for example, legislation was passed to exempt a proposed facility from regulation by the State's Certificate of Need program. This was the first such legislation passed in New Jersey, and it is believed to have passed principally because of the political power of the bill's sponsor, the Senate Majority Leader.[1] There has been no special interest legislation involving rate setting to date. Observers believe that there is enough support for both health planning and regulation within the legislature that the political influence of the sponsor, rather than sympathy for the principle involved, will determine whether exemptive legislation is passed in the future.

Recently, the legislature passed a bill authorizing direct state subsidies to two municipal hospitals: Bergen Pines and Jersey City Medical Center (JCMC). The bill was passed in November 1977, and the subsidies were made retroactive to July 1977. The origin of this legislation, which is unusual in New Jersey,[2] stems from the view of the current Commissioner of Health that public hospitals provide a valuable service in the state by caring for the poor. It also was clear that JCMC in particular had serious management and financial problems, and the Department recognized an opportunity to intervene to solve some of these problems; in exchange for state funds to reimburse the hospital for the cost of treating indigents, the Department was given the authority to step in and help the hospital improve the efficiency of its operations. Bergen Pines, whose management problems were not as acute, also was included in the authorization because it is the state's only other public hospital. Although subsidies were paid to the two hospitals during the last two fiscal years and are expected to be authorized for FY 1980, it is believed that the subsidy program will be temporary.

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[1]This exempt legislation was recently stricken down by the courts. The court's decision is being appealed.

[2]Direct subsidies have been paid for a number of years at Maryland Hospital, affiliated wih the College of Medicine and Dentistry of New Jersey, to support its teaching activities.

Planning and Certificate of Need

New Jersey's Department of Health is the designated State Health Planning and Development Agency (SHPDA), whose functions are performed by the Divison of Health Planning and Resources Development. The Division, in turn, is functionally subdivided into four parts: Health Plan Development Services (HPDS), Health Resources Development Services (HRDS), Health Economics Services (HES), and Health Data Research and Analysis Services (HDRAS). Regulatory activities are largely the province of HES, including the administration of the rate-setting program. Planning activities came under the aegis of both HPDS and HRDS. HPDS has overall responsibility for plan development, the establishment and implementation of standards and criteria and, to some extent, Certificate of Need (CON) and 1122 reviews. HRDS has primary responsibility for the conduct of the CON and the 1122 reviews, monitoring the progress of approved projects, and encouraging the growth and development of health maintenance organizations and other alternative health care delivery systems. Within HRDS, Certificate of Need responsibility is shared by the Review and Comment Program and the Health Care Facilities Construction and Monitoring Program. The Review and Comment Program plays a largely administrative role in the CON process, serving essentially as a conduit through which each application initially passes prior to substantive review.

Although the Review and Comment Program serves as New Jersey's formal Certificate of Need agency, actual CON responsibility is shared by HRDS, HPDS, and HES. Applications are received by Review and Comment; when an application is determined to be complete, the substantive review process begins on both the state and regional (HSA) levels. The official Department of Health position is determined at the Department's Pre-review Committee meeting. At this point, the evaluations of each reviewer are presented. As such, HPDS comments on the relationship of the proposal to the state health plan, HES comments on the application's financial feasibility, and so on.

Recently, the relevant HSA has been invited to participate in this process. The decision reached at the pre-review meeting is the recommendation submitted to the Statewide Health Coordinating Council (SHCC). The HSA submits its own recommendation to the SHCC (according to one observer, the recommendations of the Department and HSAs rarely differ), and the Council conducts a public review of the proposal. At the conclusion of this review, the SHCC submits its recommendation to the Commissioner of Health, who thereupon makes a decision on the application.

In accordance with New Jersey law, the Commissioner's decision is subject to appeal by the applicant, the SHCC and the HSA. All CON appeals

are heard by a hearing officer of the Health Care Administration Board. The HCAB's decision is the final administrative step in the process; any further appeals must be made to the judicial system.

The development of planning standards and criteria is the function of Health Plan Development Services. Generally, the standards establish minimum requirements covering utilization, occupancy, staffing, quality of care, and so on, for the planning, Certificate of Need, and designation of health care facilities and services. Each division of the Department of Health has input into the implementation process for proposed standards. Additionally, the final version of each standard also reflects the ideas of providers and their representatives as well as of consumers.

The planning and rate-setting processes in New Jersey are linked in several ways. The two functions are administered within the same division within the Department of Health, the Division of Health Planning and Resources Development. The close bureaucratic proximity of the two functions has led to an intimacy between them that is not characteristic of other states. Specific linkages between the planning and rate-setting processes include the manner in which HES handles CON approvals, the financial feasibility review of a subset of CON proposals by HES, a proposed economic feasibility evaluation of CON applications by HES, HES input into the planning standard process, and HPDS review of volume changes for budget review. Each of these linkages is discussed in turn.

First, Certificate of Need approvals are actually handled on two levels by HES. The interest expense associated with a particular project is automatically "passed through" by HES provided the project receives CON approval. However, CON approval does not signal the automatic pass-through of any increased operating costs that result from the project, nor is it a sufficient basis for an automatic rate adjustment in those cases where the increased operating costs resulting from a project force a facility over the challenge limit. One might expect that the threat of a challenge would serve to deter a health care facility with high operating costs from applying for a Certificate of Need, but according to one observer, the threat of a rate challenge does not deter potential CON applicants.

Second, HES conducts a financial feasibility review on all CON proposals. This evaluation covers the capital costs, methods of financing, and operating cost changes involved in the proposal. Currently, the conduct of this review, which must be completed within forty-five days, is hampered by both time and staffing constraints. The monthly application volume ranges from fifteen to fifty, and one observer estimated that the evaluation of one large application could require as much as a week and a half. Presently, only

three staff persons are assigned to this process,[1] and they are overwhelmed by the workload. Due to these constraints, the evaluation is ordinarily limited to answering two basic concerns: Can the hospital adequately fund the capital cost portion of the project? and Will future operations at the facility support the operating costs? Hence, acceptable financing is only one part of financial feasibility. When the project is associated with one particular cost center, existing high operating costs in that center can lead to an unfavorable financial feasibility evaluation. In addition, approvals may sometimes be conditional upon an applicant's shifting to less expensive sources of financing than were proposed in the application.

As was noted above, financial feasibility is hampered by resource constraints, most particularly a shortage of staff. In addition, however, the analyses are hampered by the lack of a comprehensive data base against which, for example, hospitals' projected operating costs can be validated. Equally important, there currently is not much solid ground on which to base an analysis of financial feasibility; there are no widely accepted standards defining whether or not a hospital is in sound financial condition. Since the analysis must be somewhat subjective, the resulting conclusions are sometimes refuted. Due to the lack of data and firm standards, the hospital must demonstrate severe financial problems before the analyst will conclude that a project is financially infeasible.

In part for the reasons just outlined, the primary determinant of CON status appears to be need rather than financial feasibility. Financial infeasibility must be fairly blatant before it has any significant impact on the Department's recommendation; an estimated five percent of all recommended denials are denied on this basis. The most significant impact of the financial feasibility analysis seems to be less in determining the outcome of the review process (i.e., approval or denial of the application) than in affecting the financing of approved projects. Commonly, conditions are placed on CON approvals that require certain changes in the way the project will be financed, such as shifts to less expensive sources of funds. It is in these more subtle ways that the financial feasibility analysts exert the most leverage on hospital capital expenditures.

A third area of linkage between planning and rate setting involves the fact that New Jersey is considering the inclusion of an economic feasibility review, also conducted by HES. Contingent upon adequate staffing, this economic evaluation will study the areawide implications that each CON application may have upon other providers and services, such as occupancy, referral patterns, labor markets, duplication of facilities and services, and so on. It is anticipated that these reviews will be coordinated with the HSAs.

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[1]This phase of CON review has not been officially budgeted, although positions have been budgeted for fiscal year 1980. Technically, the staff is on loan from other Division functions.

Fourth, as mentioned above in the section devoted to the development of planning standards, HES is formally involved in the process in that proposed standards are sent, as a matter of course, to HES for review and comment. In the past, HEW input notwithstanding, the planning standards had been criticized for not being sufficiently quantitative.

Fifth, HPDS evaluates unusually high volume changes budgeted in the SHARE reporting forms. Planning personnel are consulted by rate-setting staff to ascertain the reasonableness of any change in volume that exceeds two percent. The assessments of the planning staff are based on its knowledge of the particular hospital. This ongoing linkage, however, is informal and does not result in systematic, in-depth analysis or written reports.

Hospital Workers' Union

District 1199J of the National Union of Hospital and Health Care Employees represents approximately 3,700 hospital workers in New Jersey and is the only union in the state that represents solely hospital and health care workers. Most of its membership is currently located in urban hospitals in the northern part of the state. The union represents a wide range of professions, including service employees (dietary, housekeeping, aides, and orderlies), technicians, LPNs, and some of the professional staff (including RNs, social workers, and pharmacists). The extent of unionization, and the types of employees that have organized, vary by hospital. Table 8 presents data on the scope and chronology of hospital unionization. The eleven hospitals with employee unions can be divided into two groups: one where unionization took place well before 1970, the other organizing well after 1970. There has been relatively little growth in unionization in New Jersey hospitals since 1976.

Except for a loose consortium of four Newark hospitals, each hospital bargains separately with the union. The settlement reached with this consortium, however, sets the trend for subsequent agreements with the other hospitals. Contracts are renegotiated biannually, and all current contracts were due to expire July 1, 1979.

Wage and benefit packages negotiated by the hospital workers' union in New Jersey closely follow those negotiated in nearby New York City. Many of the developments observed in New Jersey have been strongly influenced by activities in New York. One 1199 official stated that his union essentially followed the pattern established in New York (with regard to wage rates, fringe benefits, etc.), but with a one-year lag.

Historically, union-management negotiations do not seem to have been particularly hostile. The unions appear to be satisfied with the wage and benefit settlements, using New York as the standard. There have been no

TABLE 8: Trends in Employee Unionization in New Jersey Hospitals

Hospital, Location and Employee Group	Number of Employees	Year Organized
Clara Maass, Belleville		
Service and Maintenance Unit	419	1963
Respiratory Department	10	1971
Hospital Center of Orange, Orange		
Service and Maintenance Unit	205	1963
LPNs	102	1976
Newark Beth Israel, Newark		
Service and Maintenance Unit	342	1963
X-ray, Respiratory Departments	66	1971
St. Barnabas Medical Center, Livingston		
Service and Maintenance Unit	458	1963
Helene Fuld, Trenton		
Service and Maintenance Unit	208	1966
St. Michael's Medical Center, Newark		
Service and Maintenance Unit	265	1968
Pharmacy and Dietary (Professional)	23	1968
Laboratory	47	1974
LPNs	69	1977
St. Francis, Jersey City		
Service and Maintenance Unit	212	1974
X-ray, Laboratory, Respiratory Depts.	46	1972
St. Mary, Hoboken		
Service and Maintenance Unit	291	1972
X-ray, Laboratory Departments	65	1972
Respiratory Department, LPNs	44	1978
Mountainside, Mountainside		
Service and Maintenance Unit	339	1973
Barnert Memorial, Paterson		
Service and Maintenance Unit	195	1975
United Hospital of Newark, Newark		
Laboratory, X-ray, Respiratory LPNs	200	1976
Pharmacy, Dietary, Social Workers, Therapists (Professional)	45	1976
TOTAL HOSPITALS	11	
TOTAL EMPLOYEES	3651	

Source: District 1199J

contract renewal strikes in six years. The key issues seemingly have been wages and health benefits. While the union is concerned about layoffs and job security, these issues have evidently not impeded contract negotiations or predicated any strikes. The union resists cutbacks in staffing, although no instances of direct union action in response to cutbacks were found. Staff cutbacks, however, are more likely to take the form of attrition than actual layoffs.

In approaching the bargaining table during past years, the union claims to have disregarded state restrictions on hospital cost increases. It is, however, clearly cognizant of both state and federal inflation targets. It is also true that the last round of contract negotiations took place in 1977, in the early stages of the SHARE system. Since the program had then been in effect only for a short time, it is unlikely that hospital administrators knew how rigorous it would be. Thus, their approach to contract negotiations probably did not deviate significantly in 1977 from that used in the past. The round of negotiations over contracts beginning in July 1979 probably are more indicative of how seriously administrators regard the SHARE system and how constraining it is for them.

With regard to hospital rate setting, the union's interests stem from its role as both a supplier of labor to hospitals and a consumer of hospital services through its union-sponsored health insurance plan. On the supply side, the union is concerned that negotiated wage increases be passed through (although state regulators have explicitly denied that this is their policy). On the demand side, the union is a provider of hospital benefits through its union-sponsored health plan. Since it did not come under the jurisdiction of state rate regulation, the plan was forced to pay hospital charges along with other private insurors outside of Blue Cross. The union therefore strongly supported the passage of S446, extending rate-setting authority to all payors, and it expects to pay reduced charges to hospitals as a result.

PROGRAM RIGOR, INCENTIVES AND EQUITY

Rigor and Incentives

Outcomes of Rate Setting

The ultimate measures of rigor in a rate-setting program are the reimbursement rates that are set initially, and the method by which retrospective adjustments are incorporated into subsequent rates. While there may be certain drawbacks to focusing exclusively on rates (e.g., per diem rates may be offset by longer mean stays, leaving total hospital revenues

unaffected), they do constitute the end product of regulatory activity and should be considered prima facie evidence of program rigor.

But rates cannot be looked at in isolation; they must be compared to some base. One such base is rates of increase in per diem and per admission revenues and costs in years prior to the program. Another possible base is national trends in per diem or per admission revenues and costs. Still another base is rates of cost increase during the life of the program. The last, of course, would not be strictly independent of the prospective rate, but the comparison would give some indication of how easily hospitals are staying within the rates assigned to them.

Some overall trends, taken from rate and expenditure data collected and analyzed by the New Jersey Hospital Association, are presented in Table 9. The table provides the rates of increase of Administrative Payment Rates (APRs) and projected expenditures (costs) on a weighted average basis for 1975-78. Column (1) lists the average percentage change in the APR, the rate that is set after budget review and before appeals, while column (2) presents the percentage increase in APRs over the prior year's costs. The first full year of implementation of the SHARE program was 1976; 1975 was a transitional year. According to Table 9, APRs for 1975 were extremely tight, actually slightly less on average than incurred costs. Prospectively set rates went up 11.4 percent the following year, a 12.1 percent increase over the previous year's costs.[1] APRs grew less rapidly the next two years, 9.0 and 5.8 percent in 1977 and 1978, respectively. In 1977, APRs failed to grow nearly as fast as costs so that by 1978, APRs were only 0.1 percent above 1977 hospital costs. Essentially no cost increases on average were allowed for 1978.

TABLE 9: Rates of Increase in APRs and Costs for New Jersey Hospitals: 1975-1978

Year	APR (1)	APR(t)/Costs(t-1) (2)	Number Hospitals Reporting (3)
1975	-1.5%[a]	-.8%[a]	98
1976	11.4	12.1	111
1977	9.0	5.2	114
1978	5.8	0.1	111

[a]Increase in Final Payment Rates (FPRs) rather than APRs

Source: New Jersey Hospital Association, 1978

[1]The 11.4 percent APR increase actually translated into a 12.1 percent increase over 1975 costs because 1975 APRs were below costs.

The program is probably not quite as tough as it may appear. These data were provided by the Hospital Association and may vary from actual audited cost statements and Health Department statistics. Moreover, APRs are being compared, not FARs or FPRs. It is inevitable that final payment rates, after appeals and other retroactive adjustments are included, will be higher; how much so is unknown. But if FARs are not much greater than APRs, hospitals will have to adjust their long-run behavior to work with the APRs. Overall, they apparently have not done so through 1977.

Reactions of Regulatees

Hospital Association. The New Jersey Hospital Association has experienced a fairly unique role reversal during the relatively long history of rate regulation in the state. While budget review was initially run by an arm of the NJHA, the takeover of the system by the Department of Health redefined the Association as an outside observer.

Whether or not the HRET system was effective in containing hospital costs, it is undoubtedly true that it paved the way for the implementation of SHARE. Budget review as conducted by the HRET increased the sophistication of hospital management by improving budgeting and financial planning skills; it also may have made administrators more cognizant of ways to increase efficiency and control costs within their institutions. Undoubtedly, the lessons were learned better by some than by others. Nevertheless, by the time the state took over the rate-setting process, hospitals were at least familiar with regulation and were better equipped to provide the information required of them by the SHARE system.

The involvement of the NJHA is currently limited to two areas: monitoring of the program and advocacy of hospital industry interests in whatever ways possible. It is not directly involved in the process of setting rates. While it has been an active adversary, NJHA's role has been limited. Through its role in the appeals process, the Association attempts to reduce the impact of rate setting on the individual hospitals, to make the program more flexible. Through its involvement in other administrative and legal activities, the Association attempts to lessen the further encroachment of regulation over hospital activities and to rectify the program provisions that it perceives to be grossly unfair to hospitals.

On balance, the participation of the NJHA through these more indirect channels has probably affected the rigor of the program only marginally. Its response to the program indicates that the Association views the state regulators as tough, rigid, and inflexible. The Department, however, recognizes the potential power of the NJHA to undermine the program, and Association support is often sought, or its input taken into consideration, when Department policy is made. Negotiation between the two sides often results in a compromise solution, thus avoiding crippling lawsuits or other forms of opposition likely to result from unilateral action.

Unions. District 1199J has not been an active force in the hospital regulatory scene in New Jersey. Union penetration is limited to eleven hospitals, nearly all of which are in the Newark area, although the impact of union negotiations is felt in nonunion hospitals to some extent.

This year's round of contract negotiations should be the first real indicator of how constraining rate setting is viewed to be by hospital administrators. With contracts due to expire June 30, 1979, negotiations began in early 1979 following three years of experience with the SHARE system. The previous round of negotiations took place in 1977, when SHARE had been in existence for a relatively short time. Gains in 1977 appear to have taken the form of reduced working hours rather than increased wages. The hospital employees' union has apparently not been a strong political force; activity has been limited to testimony on behalf of S446 to expand the scope of regulation to all payors. In this context, the union's interest was that of a payor of hospital costs through the union-sponsored health plan.

Structure of the Rate-Setting Program

Organization. The organizational structure of health planning and regulation is somewhat unusual in New Jersey. The various planning and regulatory functions are all contained within one Division of the Department of Health, which greatly facilitates their integration. Although the functions are administered separately within different parts of the Division, they are viewed as parts of a coordinated system in New Jersey. The organizational structure eases the coordination of the different functions by reducing the interbureaucratic red tape and infighting that frequently accompanies organizational separation; integration can be achieved through informal channels such as Division meetings. The clear policy direction and sense of purpose that comes with this structure seems to provide a strong foundation for the rate-setting system.

The rate-setting process can be characterized as budget review with formal screens. The budget review process is conducted according to explicit rules that define a sequential screening process incorporating specific departmental challenge ratios. These rules are generally applied uniformly by the budget analyst; flexibility is added to the system through appeals to the Hearing Officer or to officials of the Department of Health. As it has been established, the process is fairly well insulated from industry pressure, although the existing backlog of appeals has tended to adversely affect its credibility.

Implemented in budget year 1976, the SHARE system has been in operation three full years, with few changes made during that time. The Department hierarchy--mainly the Commissioner, Deputy Commissioner, and Assistant Commissioner for Health Planning and Resources Development--

until recently had been unchanged since SHARE was implemented, so policy direction has remained stable. At lower levels, however, from budget analysts to Service Director, there has been considerable turnover, which has resulted in considerably more reliance on the written rules than would probably occur were the regulators to stay on and become familiar with the individual institutions.

Input to the Rate-Setting Program

HES has a staff of twelve analysts and three supervisors to administer the SHARE system. On average, therefore, each analyst is assigned responsibility for about ten hospitals. Given the extensive computerization of the budget data, this seems to be a reasonable workload. Expansion of the global rate for budget year 1979 further reduced the demands on rate analysts.

Budget data received from the hospitals are computerized, once they have been checked for completeness, and cost center screens are developed from the data file. The process of setting rates, prior to appeals, consists largely of statistical screens and application of formulae, all of which is greatly facilitated by computer calculations.

For the most part, the analysts are young; few have experience with hospitals or other regulatory settings. The educational backgrounds of the analysts are diverse. The relative inexperience on the part of the analysts, with either hospital administration or regulation, has led to increased reliance on explicit rules governing budget review and to charges by the industry of arbitrariness, rigidity, and insensitivity to hospitals' special needs.

Process of Rate Setting

Definition of Rate Base. Although the New Jersey system is one of budget review, the rate base against which proposed budgets are evaluated is cost-based. The incentive to overspend in order to increase the rate base for future years does not exist under this system, because actual hospital expenditures over allowed costs in the base year are subtracted before base-year costs are compared to proposed budgets (the so-called minimum base period challenge). In fact, program disallowances would grow over time if overspending were not eliminated because of the inflation in those costs.

A second question involving the rate base concerns the treatment of CON approvals. While screens exist for capital costs, they are not particularly effective, so nearly all of the capital costs (i.e., depreciation and interest) associated with these projects are passed through. Associated operating costs are not treated as pass-throughs,

however. For hospitals already exceeding the peer screens, any projected increase in departmental costs due to capital expansion is denied. Therefore, hospitals may well be reimbursed for the initial costs of a project, but not the recurring operating costs. In order to proceed they would have to find ways of cutting costs elsewhere.

Reimbursement Mode. Cost-based rates are established by the Health Department for Blue Cross and Medicaid patients on a per diem payment unit. Thus, the more Blue Cross or Medicaid inpatient days a hospital has, the greater its annual revenues. This could encourage a perverse incentive to raise length of stay (LOS) if marginal costs are less than average, although safeguards exist in the system to prevent such abuse. First, inter-hospital cost comparisons by department define admissions as the unit of service in many cases. Increases in LOS without changes in admissions would only raise costs (e.g., extra routine nursing) and not output, possibly leading to peer group penalties in setting future rates. Second, while end-of-year adjustments are made for volume increases (attributable possibly to longer stays), ratios less than 100 percent are applied to cost increases. Consequently, for most departments, hospitals generally do not receive a cost increase equal in percentage terms to the increase in volume. Third, in establishing the rate base for subsequent years, hospitals are limited to the lower of volume-adjusted budget dollars or incurred additional costs (resulting in improved cash flow from Blue Cross and Medicaid). Their rate base in the next year would be based on unchanged costs and not those costs adjusted upward for extra volumes. They conceivably could continue to raise LOS and profit from the system so long as marginal costs were low, but they would quickly face other screens as their marginal costs began to rise.

Interhospital Comparisons. The New Jersey prospective rate-setting system employs very formal, systematic, computerized sequential screening of hospital costs and proposed budgets. The sequencing begins with total hospital costs and moves to more disaggregated clusters of departments, and finally, to individual departments. Costs in all inpatient departments (including Emergency Rooms) are screened. Nondepartmental financial costs (e.g., malpractice insurance, interest, and depreciation) are screened as well, but not as stringently as other operating costs. Most ancillary, support, and routine nursing departments are clustered into three groups for an initial cost screen, thus allowing for intracluster cost shifting. All in all, this can lead to lower dollar penalties within individual departments. The rationale for using department clusters is that it allows for differences in operating, diagnostic, and treatment modes across hospitals. No explicit screens exist on occupancy rates, LOS, admission rates, or case mix. Several implicit penalties exist, however, for low occupancy or long LOS.

Many departments (and all clusters) are compared on a statewide basis, so these groups are very large (100 or more). No grouping is used for clusters of departments because it is presumed that all hospitals ought to be able to keep costs in these departments to state averages (adjusted, of course, for geographic differences in input prices). Finer grouping with the same challenge limits would inevitably result in more dollar penalties. The most significant departments that are not grouped (i.e., for which statewide comparisons are made) include the routine nursing, ICUs, newborn nursery, delivery room, dietary, and financial departments.

Criteria for grouping other departments include teaching status, bed size, special function (e.g., rehabilitation), or geographic location. Location is, of course, strictly exogenous, with no intergroup movement of hospitals. The other grouping criteria, teaching status and size, are used primarily for comparing costs in ancillaries and are more or less exogenous in the short run. Given the relative medians across groups, some incentive may exist for a hospital to change its status from nonteaching to minor or major teaching. Changes in teaching status are not easy to achieve, however. Based on comparisons of medians, no clear-cut incentive exists either to increase or decrease bed size.

The statistics used to determine the number and dollar size of penalties are group median costs and challenge ratios allowing unit costs to be ten, twenty, or fifty percent, depending on the cost center. Twenty-three cost centers have challenge limits ten percent above the median, suggesting fairly tight limits. If costs are normally distributed, the use of means or medians is immaterial to the number and size of dollar penalties. If costs are generally skewed, however, it will make a difference. Left-skewed distributions will result in median costs below mean costs, resulting in more dollar penalties; the opposite is true of right-skewed distributions. A slight left skew exists in the 1978 New Jersey data for routine nursing care per admission so that, by using medians instead of means, three more hospitals were over the challenge limit. The opposite is true of electrodiagnosis costs in minor teaching hospitals, however, so the tightness becomes an empirical question--it all depends on whether outliers are high or low cost.

The relative importance of rate increase denials attributable to the grouping comparisons is unknown at this time but is believed to be significant. Data are readily available in hard-copy worksheets for use in determining their significance and direction over the life of the program.

In sum, the computerized screens of interhospital costs play a key role in setting hospital rates under the program. Analysts rely very heavily on peer comparisons to justify denials of requests made on other grounds (e.g., excessive wage contracts, low demand). They are uniformly consistent, automatic, and binding on a relatively significant number of

hospitals. "Creative accounting" may evade screens at the individual department level, but generally the screens would show up at the cluster level. The use of "medians" and narrow variance limits would suggest a tough program, but it is conceivable that "means" could be even tougher.

Volume/Intensity Adjustments. Adjustments to rates due to increases or decreases from projected volumes are currently made only at year's end. This provides a cash flow reward for hospitals enjoying unexpectedly high volumes (assuming costs are not rising as fast as volume) and a penalty for those experiencing unanticipated declines.

A generic problem of most rate-setting systems is the incentive for hospitals to use low volume forecasts to set high rates, then overrun projections during the rate year. Several checks exist to counteract this incentive. First, volume projections are compared to historical utilization statistics and occupancy rates, and projected declines are challenged. Second, if hospitals consciously raise utilization above projected figures, that utilization becomes the presumptive base next year. Third, volume projections are used to inflate last year's department costs. If volume projections are low, then allowable cost increases will be less and denials undoubtedly more frequent. Fourth, outpatient rates are purposely not set on a prospective basis in order to encourage substitution of ambulatory care for inpatient care.

Moreover, projected volume declines do not automatically result in higher rates without any adjustment to costs. If volume is predicted to decline, costs are also expected to decline in proportion to the amount of variable costs involved. Thus, if volume decreases five percent, rates may only increase three to four percent, depending on fixed/variable cost proportions in the hospital. Nor are volume increases rewarded with equal percentage increases in costs, so that rates generally fall (although total revenues will rise).

Some evaluation of the reasonableness of volume increases is made using historical statistics and planning data, but the process is less rigorous than that for cost increases. Recourse to area health plans is made in exceptional cases. Currently, no systematic comparison is made of the impact of volume changes in one hospital on other local hospitals.

A sliding scale of automatic allowances exists for intensity increases tied to the peer comparisons. Hospitals with excessive costs are not allowed rate increases for intensity, while hospitals considerably under peer medians can enjoy up to three percent increases for intensity. Hence, an incentive exists for less expensive hospitals to raise intensity, and a disincentive is created for expensive ones. Automatic allowances for intensity range from zero to three percent, a relatively small adjustment. This range is quite low for ancillary services, based on national statistics. Any intensity-related cost increases above allowed rates must be justified.

No explicit LOS screen exists in the system, although for some peer comparisons, admissions are adjusted by hospital case mix, weighted by state LOS by diagnosis. As admissions rather than patient days is used as the definition of output for many departments, little incentive exists to increase LOS, which could lead to interhospital cost challenges.

Trend Factor. Proxies used to project input price inflation are exogenous to individual hospitals and the industry, with a few insignificant exceptions. Wages, the largest hospital cost component, are proxied by the BLS Employment Cost Index for the Northeast Region, which is strictly exogenous. Only malpractice premiums are based on reported costs of New Jersey hospitals and hence are "passed through" the trend factor. No other special consideration is made for extraordinary cost items. The disaggregation of the trend factor into labor and nonlabor components is considerable; cost proxies are well analyzed, both from an incentive and an equity standpoint. The role of the factor is to permit hospitals to keep up with the rest of the regional economy in paying wages and other input prices--no more, no less.

Trend factors have averaged between seven and eight percent per annum for the 1976-78 period. Additional volume and intensity allowances of two to three percent bring the allowable rate of inflation in the program to ten to eleven percent annually. This is considerably below the national increase in hospital costs over the same period, but higher than the CPI.

Data Requirements. The detail and organization of data required from hospitals ensures that they are comprehensive, specific, and pertinent to the setting of rates. Both staff and computer validation checks are used, and implicit penalties are imposed for delayed submissions. The range of data required, including detailed ancillary volumes, costs, real inputs by department, and case-mix data on all admissions, speaks of a program very concerned with monitoring a wide range of hospital behaviors and activities. Another novel aspect of the data base is the 100 percent census of case mix (operative only in the last year) to be used to control for LOS differences. (Eventually, case mix will be used to set reimbursement rates based on cost per case under the DRG system.)

Indicative of the seriousness of the effort is the requirement that hospitals report any and all fee-for-service arrangements with hospital-based physicians, including methods of compensation. Another example of rigor is the requirement of written documentation for each disputed cost item; failure to submit such documentation prior to budget reviews is tantamount to accepting the analyst's decision. Finally, while the Health Department does not perform audits, audits are done by Blue Cross to insure that reported budget data are valid. Hospitals submit actual and projected costs for the base year as part of their budget submission for the new calendar year.

If these cost figures are inflated, Blue Cross audits will lead to reductions in rates, albeit with a considerable lag.

Budget Reviews and Negotiations. Observations, interviews and cursory examination of hospital rate files indicate that reviews tend to be fairly rigorous. In addition, the rates of increase in reimbursement rates would suggest that little is slipping through after the computer screens and initial desk work. The rules and procedures for the face-to-face reviews are clear in terms of agenda and organization. Only disputed items with written documentation from the hospital are on the agenda. Meetings are open; the rate analyst chairs the meeting. Sometimes supervisors will attend to support the analyst. No formal review of retrospective items resulting in overruns in the base year is done. Volume adjustments are automatic, and volume-adjusted cost overruns are automatically disallowed. It is very difficult for hospitals that overspent last year's rate to retrieve that money in the following year.

The burden of proof is on the hospitals, not the analyst, to show why presumptively unreasonable costs should be allowed. Quality arguments are particularly susceptible to the analyst's skepticism and disapproval. Hospitals must prove to the analyst's satisfaction that specific expenditures raise quality and/or that quality is inferior in comparable hospitals. Analysts rely heavily on JCAH, licensing, and similar sources in setting minimum quality standards, not maximum ones.

The analyst's conservative position is strengthened by the peer comparisons, the volume-intensity allowances, and the case-mix data. Extensive data analysis prior to the reviews gives the analyst real information leverage in responding to submitted justifications for cost increases. If the analyst approves costs above the screens, documentation must be submitted to the supervisors as to why such variances are justified. Analysts appear to interpret the rates and screens conservatively, letting little go unnoticed.

High turnover among analysts, on the other hand, reduces continuity and familiarity with hospitals. This may or may not increase the possibility of capture. Young, inexperienced analysts could be overwhelmed by knowledgeable administrators. On the other hand, they may feel constrained to abide by the rules. Safeguards against their being unduly swayed include supervisor participation in initial reviews and a tradition of conservative interpretation of the screens and regulations.

Appeals

Throughout all stages of the appeals process, the burden of proof is squarely upon the hospital to show why disallowed costs should be

reinstated. The Hearing Officer does not allow arguments pertaining to the merits of the regulations; rather, he requires that the hospital present its case against a specific application of the guidelines. Argument over the law itself is heard only in the court system.

The Hearing Officer is an attorney, hired by the Department of Health to hear rate appeals. The officer is no doubt aware of the Department's cost containment objectives. The outcomes of the Hearing Officer appeals have tended to favor the analysts' positions, although some increases have been granted. Complete data are not yet available, but the evidence indicates that hospitals have had difficulty justifying exceptions from the SHARE methodology to the Hearing Officer's satisfaction.

As a result of the delays in the final rate determination, hospitals have apparently spent more than their approved APRs in the hopes of getting higher rates on appeal. If the facility has spent the money, it becomes increasingly difficult in subsequent years to disallow past overspending from allowable costs. The appeals backlog has thus reduced the prospectivity in the system. A true test of the strength of SHARE will come when the accumulated appeals are finally decided and past discrepancies between established rates and the hospital's actual expenditures are rectified.

Role of CON and Planning

The organizational proximity of planning, CON, and rate setting in New Jersey facilitates interaction among them, although these linkages have not yet been fully developed. Within Health Economics Services, a special unit has been created to do CON financial feasibility reviews, which analyze both the reasonableness of the capital costs and the capability of the hospitals to support both the capital and the operating costs of the project. Analysis of the latter capability takes into account the existing cost levels within the hospital, since CON approval definitely does not sanction the associated operating costs if the hospital's costs are challenged. Capital costs are generally pass-throughs, but only if they have received CON approval.

The CON financial feasibility analysis is hampered by a number of constraints, including lack of staff, inadequate data, and the absence of well-defined analytic techniques. For these and other reasons, few CON applications are denied on the grounds of financial infeasibility. More frequently, modifications in the financing of the project are made conditions of CON approval.

Except for review functions, there is little interaction between planning and rate setting. Planners are asked to review unusually high projected increases in volume, but this is an informal process. No

mechanism exists whereby the budget review process takes planning or Professional Standards Review Organizations (PSRO) standards for utilization into account, although few quantitative planning standards have yet been developed. Rate setters have not been actively involved in plan development.

Regulatory/Legislative Environment

Currently, New Jersey is relatively activist in the area of regulation. Recently, for example, tough legislation was passed to control air pollution and to regulate automobile insurance. In addition, New Jersey has tended to be fiscally conservative. It would appear that both regulatory activism and concern for cost inflation--in this case, Blue Cross premiums--came together to provide the initial impetus for rate regulation. While this regulation was not authorized explicitly--and the scope broadened--by the legislature until the 1971 planning legislation, a process was in place in New Jersey to review the budgets of high-cost hospitals as early as the late 1960s.

While there was not sufficient opposition to prevent passage of the 1971 planning law, there was also not any active support in evidence (aside from that of Blue Cross). The rate-setting provision was in some sense a "sleeper" within the bill, tucked in the midst of comprehensive health planning provisions. As a result, budget review as administered by HRET was left intact for another three years, when the election of a new governor and a widely publicized critique of the existing system led to a change in the administrative locus and the process of rate setting.

The New Jersey legislature has been, for the most part, supportive of planning and rate setting as administered by the Department of Health.[1] Tacit approval for rate-setting activities has accompanied passage of the Department's budget each year. No special interest legislation has been passed to alter the scope or processes of the program or to exempt any institution from its provisions. The only legislated change since 1971 was S446, which was initiated and strongly supported by the Department of Health with the aid of the Governor's office. The compromises reached with the NJHA cannot be said to have undermined the Department's plans; the NJHA, it has been noted, was weakened somewhat by divisions within its own ranks.

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[1]Precedent-setting legislation was passed in 1978 to exempt a proposed new hospital from the Certificate of Need process, but it is believed the political power of the sponsor rather than support for the principle involved accounted for the bill's passage. The law has since been stricken down by the Court.

The Hospital Association is acknowledged to be a political force with which to be reckoned, although it does not receive support from within the current administration. Nor is it strongly supported in the legislature, although proponents of S446 believed that passage of the bill would have been less certain had the NJHA been mobilized against it.

Summary

When the locus of rate setting was transferred from the Hospital Association to the Department of Health, one of the objectives was to make the system more rigorous. Since that time, a formal and relatively elaborate rate-setting methodology was designed and implemented in what appears to be a politically and judicially supportive environment. The SHARE system involves the application of a systematic, sequential screening process to hospital budgets with relatively little discretion exercised by budget analysts. While the evidence indicates that the system has been rigorous in containing per diem cost increases, more conclusive judgments must await resolution of the backlogged appeals process.

Equity

Extent of Due Process. By law, rate regulation must comply with the New Jersey Administrative Procedure Act in its dealings with the state's hospitals. This act governs the openness and fairness of proceedings between government agencies and the public. All proposed changes in the regulations guiding the SHARE program must be published in the New Jersey Register before they can be considered by the HCAB. Providers are well represented on the HCAB itself. All Board meetings are open to the public and concerned groups are invited to present their views.

Although the guidelines for the budget review set down by the HCAB must be followed, hospitals are given several opportunities to justify disallowed costs. They have two opportunities for face-to-face negotiations with the analysts. The first of these are the administrative hearings that are held at the hospital's request after the Proposed Administrative Rates are issued. At this point, written documentation is also submitted to delineate the hospital's requests for exemptions from various screens and to provide evidence to the analysts of the reasonableness of its cost claims. The hospital may also present its case to a Hearing Officer. While it has been the tendency of the Hearing Officer to support the Department of Health's position, adjustments are made to a hospital's rate if it can present a good case for such changes.

Protection of the hospitals' interests has been written into the law. While the system may appear harsh to some hospitals, they do have opportunities to air their grievances and to get results. Until more data are available regarding FARs and FPRs, it is hard to tell just what percentage

of complaints are being handled administratively. Yet it would seem safe to assume that many problems are being handled at the Department level and that legislative or judicial remedies, although available, are frequently unnecessary. But when administrative procedures fail to produce the desired results, the court system is available to the hospitals.

In addition to the formal procedural requirements built into the system, informal avenues for industry input have been created as well. For example, the Department has solicited the input of the hospital industry in setting regulatory policy. Nonetheless, policy tends to be much more dependent on the approach of the particular individuals within the Department of Health.

Ambiguity in Rate Setting

The provision of the law that currently governs rate regulation is extremely vague. Overall goals of the legislation are general--"hospital and related health care services of the highest quality, of demonstrated need, efficiently utilized at a reasonable cost are of vital concern to the public health"--and provide no indication of what specific purposes rate setting is to serve. The scope of authority granted by the legislation is contained mainly in the following two provisions:

- payment by government agencies for health care services provided by a health care facility shall be at rates established by the Commissioner, based on elements of costs approved by him; and

- payment by hospital service corporations, organized under the laws of this state, for health care services provided by a health care facility shall be at rates approved as to reasonableness by the Commissioner of Insurance with the approval of the Commissioner of Health. In establishing such rates, the Commissioners shall take into consideration the total costs of the health care facility.[1]

The granting of authority is broad, but nonspecific as to objectives, time frame, or methods. Excepting that the Administrative Procedure Act must be adhered to and that a uniform system of cost accounting should be approved by the Commissioner of Health, no guidance is provided for the implementation of this portion of the law. This is no indication, for example, of what should constitute "elements of cost" or "reasonableness."

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[1]Ch. 136 and 138, Laws of New Jersey, 1971, Health Care Facilities Planning Act, Sec. 18b and 18d.

The controversy surrounding many issues and the lack of a clear mandate or even more specific direction hampered the program in its early stages. There was even ambiguity surrounding the provision that authorized the setting of rates for payment by "government agencies." The Attorney General's interpretation was that this term did not include the state Medicaid program, so payment of Department-approved rates by Medicaid was arranged through an interagency agreement. Resolving these very thorny issues as matters of Departmental policy presented serious problems for Department staff during the implementation phase.

In contrast to the authorizing legislation, the rules and regulations governing the rate-setting process, as approved by the HCAB, are relatively clear and unambiguous. In fact, some critics have asserted that the procedures are too specific and detailed and that their uniform application leads to excessive rigidity in the system. The regulations spell out the review procedures in detail, including how departmental screens are to work, the amount of the economic factor to be applied to allowable costs, and the granting of volume/intensity allowances. The regulations are adopted at public meetings of the HCAB, after the public has had the opportunity for review and comment. After the rules are adopted, they are disseminated to the hospitals, the payors, and other interested parties.

While the rules are clear and the hospitals apparently understand both the rules themselves and how they are applied, there is still considerable ambiguity about what can justify costs that may not pass the departmental screens. At least one private consulting firm was recently established with a focus on aiding hospitals in preparing appeal documents. Since these documents form the basis for all further appeals, they become critical to the hospital's case, and the hospitals have not been entirely clear about the types of arguments and data that will be persuasive to the individual hearing the appeal. This uncertainty may be most disadvantageous to the hospitals that lack the resources and/or sophistication to prepare comprehensive written justification for high unit costs.

Arbitrariness in Rate-Setting Systems

The systematic use of computerized screens greatly reduces the potential for arbitrary decision making on the analyst's part. Rate denials are automatic with respect to base year overspending, peer group outliers, excessive intensity increases, and the like, although each of these items can be discussed in budget reviews at the hospital's request.

Even so, arbitrariness may arise in the number and kinds of exceptions to the screens allowed by individual analysts. Some analysts may be more receptive, for example, to hospital arguments for needed intensity increases above those allowed by the screens. Supervisor approval of all allowed variances from the PAR is required, however, which is a partial check on consistency and uniformity across analysts.

Evidently, very few exceptions are allowed at the budget review level, even with extensive written justification. Because of this, many hospitals regard the review process as aribtrary and capricious. The criticism would be more appropriately directed at the screens that set initial rates, however, as analysts apparently rely heavily on them for buttressing their decisions.

Personality clashes may introduce an element of arbitrariness in face-to-face reviews. It is impossible to say how often this happens without first observing a representative sample of the reviews, but historically it does not seem to be a serious problem, thanks to the high turnover rate among analysts (ten out of eleven in 1978).

Safeguards that reduce potential arbitrariness in face-to-face reviews include supervisor review and approval of decisions and written justification of the analyst's final decision. As these justifications become the basis for further appeals to the Hearing Officer and the courts, care is taken to explain decisions clearly and in detail. The very fact that there are written documents detailing the hospital's reason for the additional expenditure as well as the analyst's final decision after all written and verbal communication is completed speaks to the openness of the process. Arbitrariness is most likely to occur when behind-the-scenes verbal agreements are made and not recorded for public scrutiny.

A question arises: whether hospitals that are better able to document their case for rate increases are more likely to be granted an exception for reasons beyond the merits of the case. With any face-to-face review involving justifications, this is bound to happen, but it is impossible to tell how often it happens in the system without investigating hospital files and attending the actual reviews. Because denials apparently exceed approvals by a considerable margin, such arbitrary outcomes would seem insignificant in the large, but even if it happens only rarely, it can have damaging repercussions for the equity of the process as perceived by the regulatees.

A final source of arbitrariness involves the informal hearing channels that exist at the Commissioner level. Hospitals can and do take their cases to the Assistant or Deputy Commissioner, either to avoid the budget review process or to obtain reversals of adverse decisions. This irregular step is tolerated by the Department to insure due process and flexibility in decision making. The possibility for arbitrary decision making is increased, however, to the extent that decisions are made informally outside the structured review process. Attempts have been made recently to structure this "extraordinary review" process and to integrate it into the rest of the system by giving the Assistant and Deputy Commissioners a list of reasonable alternatives for handling the case. Also, hospitals are now required to sign a "bill of particulars" that explicitly states the nature of the special treatment and the quid pro quos. This legally protects the

agency in any future court actions. Whether this adjunct to the regular review process increases or reduces arbitrariness is a matter for future observation and analysis.

Uncertainty in Rate-Setting System

Severe time lags in the final determination of rates contribute greatly to the uncertainty in New Jersey's system. The timing of the review process is well regulated by the SHARE guidelines until the Hearing Officer meetings are requested. It is at this point that scheduling problems and postponements often result in delays of up to a year. During this period, the interim Administrative Payment Rates are in effect. These APRs are often lower than the final rates granted the hospitals, but the hospitals are unsure of how much they will receive as a result of their appeals. By requiring that hospitals follow all steps in the appeals process or forfeit their rights to future appeals, the SHARE system encourages hospitals to request Hearing Officer meetings and thus increases the delay in setting Final Administrative Rates for more hospitals.

Indecision also results from delays in determining Final Payment Rates. Audited actual figures are not received by the analysts until long after the rate year is over, and it may be two years until the FPRs are set. Data are such a long time in coming that the hospitals may not know whether or not significant differences exist between any of the interim rates and the final rates.

The budget review methodology has not changed significantly since 1976. However, changes regularly occur in the screens and other rate-setting criteria. The HCAB approves changes in the SHARE guidelines yearly and the hospitals must remain informed about what the rate setters are requesting. In 1978, final approval of the guidelines for the rate year 1979 was given by the HCAB the week the budgets were handed in to the Department; there was no way the hospitals could anticipate any last-minute changes in those regulations. Thus, corrections will have to be handled during the upcoming administrative hearings.

The most dramatic changes occur with the rate-setting staff itself. Yearly turnover is extraordinary, with up to eleven out of twelve analysts leaving the department or moving up to supervisory capacities in one year. Even when analysts remain from year to year, they often do not review the same hospitals again. This causes the hospitals some uncertainty as to how the new analysts will respond to their requests and what the outcome of their face-to-face administrative reviews will be. Part of this problem is alleviated by the active participation of supervisory personnel in the face-to-face negotiations between analysts and the hospitals. Most of the supervisors have been in the department for several years and are known to the hospitals. And since the regulations are clearly laid out ahead of time,

the hospitals know where and why they are being challenged before the meetings begin.

The New Jersey Department of Health is heavily involved in the investigation of the Diagnosis Related Group (DRG) as a new method of reimbursement. Although the program is still in the development stages, many of the hospitals do not clearly understand the proposed system, nor are they fully aware of the implications of the DRG-based reimbursement for their financial positions. However, since the Department is likely to implement the new system on a voluntary basis at first, hospitals will have the opportunity to try it out and learn more about it before participation becomes mandatory.

Equity in Interhospital Comparisons

Hospital costs are compared by department in grouped or ungrouped form, depending on the department. Many departments are ungrouped; that is to say, hospital departments from all over the state are compared as to cost per admission, per patient day, or per procedure. It is argued by the Department of Health that enough similarity of output exists in these departments to warrant global comparisons. Most of the ungrouped departments are overhead (e.g., dietary, fiscal) or general patient care (e.g, acute and intensive care nursing). Economies of scale in any of these overhead departments would suggest some preferential treatment for small hospitals. To the extent that economies are recognized as a legitimate argument for cost variation in other departments (e.g., administrative and general), questions of equity may be raised by not using grouping throughout.

For some departments (primarily ancillaries), grouping is done by teaching status, size, or geographic area. Rehabilitation and specialized hospitals are also analyzed separately. The main reason for groupings is to partially adjust for complexity of case mix. Over time, more and more "ungrouped" departments have been grouped. This is particularly true for 1979, when Pharmacy, Central Supply, Physical and Respiratory Therapy, and Fiscal departments will be grouped by hospital teaching status and size for the first time. The Department is becoming more sensitive to case-mix arguments in light of recent court decisions. Even within groups, however, inequities may persist, and these are handled on a case-by-case basis, and some exceptions are allowed.

To further improve the equity of comparisons, case-mix data are combined with state average LOS data to adjust admissions for case-mix-related LOS variations. Thus, hospitals with more complicated cases, longer lengths of stay, and fewer admissions are not unfairly penalized.

Other equity-related aspects of the screening process include sequential screening, automatic disallowances, variable screen

limits, and interarea cost adjustments. Departments are first clustered by generic function, then screened for cost outliers. Thus, hospitals that were high in one department in order to lower costs in another would not be automatically penalized. Second, the screens on interhospital costs are automatic and invariable; all hospitals exceeding the screen limits incur penalties (or reductions in desired budgets) in the first instance. Every hospital may then attempt to justify excesses if it can. Third, because costs may vary more in some departments than in others because of variations in case mix or service mix, broader screens are applied. In Newborn Nursery, for example, the challenge limit is twenty percent above the median rather than the customary ten percent to allow for a higher incidence of abnormal births and/or lower utilization in rural areas. And fourth, before any costs are compared across institutions, they are first adjusted by relative factor price indices, thereby reducing inequities due to differences in factor markets.

Equity in Use of the Trend Factor

Input price proxies are based on the Northeast region for the most part. It is unlikely that New Jersey differs significantly in its factor markets from the region as a whole, so the proxies used can be considered fair and accurate in the aggregate. Small area variations may exist, on the other hand, which would make the labor component inequitable. If wage rates are rising faster in urban areas, for example, using an average wage inflator for the Northeast may bias the factor against urban areas somewhat, although they would be weighted more heavily in the Employment Cost Index in the first place. Inequities attributable to small area differences in labor market inflation are probably trivial once absolute price levels are accounted for. The rest of the nonlabor proxies appear to be standard, regularly used proxies, each specifically tied to a particular input.

Equity in Volume/Intensity Adjustments

Small predicted changes in patient days and admissions are taken at face value in the system and hence are completely equitable. Larger changes are reviewed by planning authorities and exceptional projections may be scaled down, although this rarely happens. Variances from predicted volumes are accounted for at year's end, so over- or understatements of volumes result in retrospective rate adjustments. In terms of cash flow, this lagged adjustment process would help hospitals that underestimated volume by giving them a higher initial rate. (They would have a lower denominator.) Hospitals that could more accurately forecast volumes would experience reimbursement rates that more closely reflected actual operating costs, a seemingly equitable outcome.

Because costs are separated into fixed and variable ones, cost adjustments are not usually equivalent to volume changes. For hospitals with identical fixed-variable cost ratios, this process is equitable. However, hospitals that are underutilized with extensive "fixed" inputs face inequities under this system. If volumes go up, costs are allowed to increase by the 50 or 100 percent proportions, even though little or no additional cost is actually incurred. Hospitals operating at or near capacity, by comparison, would have higher-than-average variable costs and would be penalized by the system. Inequities due to inappropriate application of standard fixed/variable ratios are mitigated to a considerable degree by applying the fixed/variable percentages to the actual fixed/variable costs in a particular hospital; penalizing low-occupancy hospitals through interhospital cost comparisons; permitting high-utilization institutions to justify higher-than-average marginal costs in budget reviews; and allowing only incurred cost increases (retrospectively), even if higher volumes initially implied higher costs.

Intensity allowances are made by department, based on relative efficiency; departments that are less costly per unit of service are allowed higher cost increases for intensity. This is equitable to the extent that high-cost departments enjoyed higher rates of intensity increases prior to the program; less expensive, presumably less intensive, departments are now being allowed to catch up. The cost difference may also be attributable to greater technical and economic efficiency, which is similarly rewarded.

The fundamental issue in granting intensity increases on a peer comparison basis is the similarity of output. For example, if physical therapy procedures are more advanced and more thorough in one hospital than in another hospital employing more therapists and equipment, is output sufficiently different to warrant different treatment when it comes to intensity increases? Or if case mix is that much more complicated that physical therapy costs are naturally that much higher, should a hospital be restricted in its intensity increases? Because intensity increases are tied to the peer comparisons, the equity of intensity allowances is intimately related to the overall equity of interhospital comparisons. As discussed earlier, several steps have been taken to make the peer comparisons fairer as the program evolves. Broader challenge limits and hospital groupings are two key ways in which incomparable hospitals are given relief from unrealistic cost comparisons. Also, in lab and radiology, cost/RVU ratios are calculated and intensity increases permitted depending upon relative costliness per RVU. Hence, the fact that not all hospitals are permitted intensity increases, rather only those that hold departmental costs down, suggests a fair and efficient way of apportioning intensity increases.

No strong justification, however, is given for the allowable rates of increase (one, two, or three percent). If technical progress in dialysis, for example, were resulting in much more expensive but medically effective care, then even a three percent increase may be insufficient. It still may not be inequitable across hospitals, however. The inequity would exist at the broader societal level, where resources are being allocated betwen sick patients needing dialysis and other competing needs. Societal equity is a concern that transcends the evaluation of individual programs and the way in which regulatees are treated comparatively.

Extent of Cross-Subsidization

Differences in reimbursement rates for the same service--a day of hospital care--constitute a principal source of inequity in the New Jersey system. Regulation of only certain payors has led to rampant cross-subsidization among the different payor groups. If reimbursement rates paid by regulated payors are too tight, hospitals can charge higher rates to other payors to make up the difference.

It has been estimated that payors of hospital charges pay as much as twenty-five percent more per patient day than Blue Cross or Medicaid. The differential includes primarily bad debts, which include not only the costs of care to indigents and other nonpaying patients, but also the costs not covered in rates set by the NJDH.[1] Medicare, up to this time, has continued to reimburse costs retrospectively according to its own reimbursement principles. Thus, selective coverage of payors under the current system has led to significant inequities among classes of payors, since they are not all paying the same price for the same product. While the system may be rigorous overall in holding down total costs, the distribution of benefits to the payors--and eventually the patients themselves--is unequal.

This potential for cross-subsidization has also led to inequities among hospitals, depending on their mix of patients. Hospitals, for example, with relatively larger proportions of charge-paying patients will be able to shift their costs much more readily than others. Hospitals with fewer charge-paying patients will not be able to recover costs excluded from the rate base and will end up with sizable deficits. This latter group of hospitals is more likely to be located in urban areas, where indigency costs are higher.

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[1]While overspending in total will be challenged in subsequent budget reviews, hospitals have apparently shifted some of their costs in this fashion and are awaiting the outcome of appeals for higher rates.

Summary

Since it was first implemented, a number of changes have been made in the SHARE methodology to make the program more equitable. Time-phasing, refinements in the economic factor, and increased use of case-mix data in budget review have all been added to remedy perceived inequities. Some were added specifically as a result of hospital appeals. While the SHARE system relies on the use of a uniform budget review methodology, hospitals can negotiate or appeal for exceptions. The primary source of inequity up to now has been the fact that the system regulates payments for two payors, Blue Cross and Medicaid, leading to extensive cross-subsidization. With the implementation of new legislation passed last year, all payors should soon be brought under the rate-setting system.

APPENDIX A

New Jersey State Department of Health 1977 Rate Setting

BASE PERIOD COST COMPARISONS
(Median Values)

January 1977

BUDGET GROUP	COST CENTER Abbr	Name	PEER GROUP	UNIT OF SERVICE	CHALLENGE RATIO	STATE WIDE	HOSPITAL CATEGORY: Teaching Major T	Teaching Other O	Other Short-Term Acute Large L	Other Short-Term Acute Med. G	Other Short-Term Acute Small U	Rehab Centr R	Special Care S	AREA CHARACTER ** IC	U	S	R
A	ACU	Acute Care Units	Statewide	CIP Days/Admissions	1.1	30.16											
	ICU	Intensive Care Units	Statewide	CIP Days/Admissions	1.1	98.02											
	NBN	Newborn Nursery	Statewide	Newborn Days	1.2	37.28											
	SAC	Sub-Acute Care Units	Statewide	CIP Days/Admissions	1.2	27.58											
	EMR	Emergency Room (CIP)	Character	EMR Admissions	1.1									7.67	11.78	10.53	9.03
	ANS	Anesthesiology	Statewide	Operating Room Hours	1.5	9.00											
	CSS	Central Sterile Supply	Statewide	Admissions	1.1	73.29											
	DEL	Labor & Delivery Rooms	Statewide	Deliveries + Procedures	1.1	114.94											
	DIA	Dialysis	Statewide	Procedures	1.5	97.36											
	EDG	Electrodiagnosis	Category	Procedures	1.1		5.35	5.64	5.42	4.57	4.96	8.56	5.69				
	LAB	Laboratory	Category	Admissions*	1.1		80.15	68.51	51.08	56.84	57.97	64.22	53.31				
	ORR	Operating & Recovery Room	Category	O.R. Hours + 0.241 x Operations	1.1		56.21	56.06	56.51	45.80	61.71		33.40				
	PHM	Pharmacy	Statewide	Patient Days + 3.74 Admissions	1.1	3.25											
	PHT	Physical Therapy	Statewide	Treatments	1.5	5.11											
	RAD	Diagnostic Radiology	Category	Admissions*	1.1		35.59	30.42	26.17	28.15	26.36	37.08	19.82				
	RSP	Respiratory Therapy	Statewide	Treatments	1.1	4.86											
	THR	Therapeutic Radiology	Statewide	Procedures	1.2	8.46											
	A&G	Administrative & General	Category	Patient Days	1.1		7.08	6.59	6.53	6.84	8.10	8.89	9.47				
	DTY	Dietary	Statewide	ACU + SAC Days, net of "In-Out Same Day"	1.1	9.55											
	FIS	Fiscal	Statewide	Admissions	1.1	53.77											
	HKP	Housekeeping	Character	Square Feet	1.1									2.29	2.48	2.59	2.49
	L&L	Laundry & Linen	Character	Patient Days	1.1									2.76	2.36	2.32	2.12
	MRD	Medical Records	Category	Admissions	1.1		14.62	13.79	14.04	14.57	16.74	52.20	45.56				
	NAD	Nursing Administration	Statewide	Patient Days	1.5	2.43											
	PLT	Plant	Character	Square Feet	1.1									1.66	1.71	1.72	1.60
	OGS	Other General Services	Statewide	Patient Days	1.5	1.55											
	UTC	Utilities Cost	Statewide	Plant Square Feet	1.3	1.49											
B	ANS	Anesthesiology	Statewide	Operating Room Hours	1.5	5.93											
	DIA	Dialysis	Statewide	Procedures	1.5	6.37											
	EDG	Electrodiagnosis	Category	Procedures	1.1		3.91	6.87	5.67	6.06	6.30	7.35	7.55				
	LAB	Laboratory	Category	Admissions*	1.1		12.88	17.00	13.22	11.66	14.48		26.36				
	PHT	Physical Therapy	Statewide	Treatments	1.5	1.19											
	RAD	Diagnostic Radiology	Category	Admissions*	1.1		14.84	18.61	15.77	17.15	15.30	16.16	14.56				
	RSP	Respiratory Therapy	Statewide	Treatments	1.1	.30											
	THR	Therapeutic Radiology	Statewide	Procedures	1.2	10.12											
	EMR	Emergency Room (CIP)	Character	EMR Admissions	1.1									7.49	10.49	9.95	9.61

*Rankings will also be prepared on COST/RVU to assist in evaluating intensity increases

**IC = Inner City; U = Urban; S = Suburban; R = Rural

New Jersey State Department
of Health 1977 Rate Setting

STATISTICAL AND CONTROL DATA

January 1977

CCMED-Median Cost/Admission For Intensity Factor		Teaching T	Teaching O	Acute L	Acute G	Acute U	Rehab. R	Special S
CCS Central Sterile Supply		84.60	76.75	66.65	72.25	70.66	202.06	65.30
DIA Dialysis		5.49	6.15	8.42	3.78			
EDG Electrodiagnosis	10.69	18.69	13.02	11.85	13.88	13.55	12.14	22.88
LAB Laboratory	90.93	98.91	85.66	66.41	70.75	72.21	64.22	65.30
PHM Pharmacy		48.63	45.51	37.51	37.40	42.94	135.29	53.81
PHT Physical Therapy		5.77	5.94	5.72	4.77	4.37	423.69	672.60
RAD Radiology		48.18	44.79	41.57	42.95	44.33	51.15	27.30
RSP Respiratory Therapy		15.75	14.66	15.24	15.70	18.41	20.62	9.83
THR Therapeutic Radiology		1.45	.92	.24	2.27			

Equalized Physician Compensation-Challenge Limit	Teaching T	Teaching O	Acute L	Acute G	Acute U	Rehab. R	Special S
EDR Education & Research	56,146	55,624	49,751	30,388			
PHY Physicians	48,747	45,415	40,995	40,325	35,413	53,657	62,612
RSD Residents	14,928	15,286	15,235	15,027			17,241

Geographic Compensation Indices	North	Metro	Rural
Non-Physician			
Administrative & Clerical	.9554	1.2040	1.1719
Nursing & Technical	.9659	1.0294	1.0838
General Services	.9499	1.0102	1.1465
Physicians			
Physicians	1.0182	.9756	.9882
Education and Research	1.0702	.9813	1.3551
Residents	.9815	1.1032	1.0187

	1976	1977
Standard Meal Price	1.60	1.70

Cluster Medians	Units	Statewide	T	O	L	G	U	R	S
General Services	Patient Days	37.05							
Inpatient Care	Patient Days	31.55							
Ancillary Services	Admissions		307.45	273.19	248.54	251.53	258.23	427.18	222.84

Cluster Limits	Units	Statewide	T	O	L	G	U	R	S
General Services	Patient Days	40.76							
Inpatient Care	Patient Days	34.71							
Ancillary Services	Admissions	-	338.20	300.51	273.34	276.68	284.05	469.90	245.12

	I	R	S	U
Emergency Room Full Cost Per Visit (Median)	22.74	36.53	31.25	25.41
Challenge Limit	24.57	29.62	31.39	26.52
Emergency Room Cash Receipts Per Visit	25.64	12.83	35.43	28.37
Emergency Room Physician Cost Per Visit (Median)				
Radiologists	1.55	2.74	2.97	2.09
Emergency Room	6.76	9.00	8.15	8.58
Other	.39	.54	.55	.83
Challenge Limits				
Radiologists	1.71	3.01	3.26	2.30
Emergency Room	7.43	9.90	8.97	9.44
Other	.43	.59	.61	.91

	Non-Physician	Physician
Median Cost Per RVU Laboratory	.23	.05
Median Cost Per RVU Radiology	1.69	.48

Economic Factor	Bureau of Labor Statistics	Factor
		6.4

New Jersey State Department
of Health 1976 Rate Setting

BASE PERIOD COST COMPARISONS
(Median Values)

February 1976

BUDGET GROUP	COST CENTER Abbr	Name	PEER GROUP	UNIT OF SERVICE	CHALLENGE RATIO	STATE WIDE	HOSPITAL CATEGORY: Teaching Major T	Teaching Other O	Other Short-Term Acute Large L	Other Short-Term Acute Med. G	Other Short-Term Acute Small U	Rehab Centr R	Special Care S	AREA CHARACTER ** IC	U	S	R
A	ACU	Acute Care Units	Statewide	Patient Days Net of "In-Out Same Day"	1.1	27.73											
	ICU	Intensive Care Units	Statewide	ICU Days	1.1	88.22											
	NBN	Newborn Nursery	Statewide	Newborn Days	1.2	32.44											
	SAC	Sub-Acute Care Units	Statewide	Patient Days	1.2	23.53											
	EMR	Emergency Room	Character	Visits	1.1									1.18	1.13	1.21	1.19
	ANS	Anesthesiology	Statewide	Operating Room Hours	1.5	11.01											
	CSS	Central Sterile Supply	Statewide	Admissions	1.1	62.38											
	DEL	Labor & Delivery Rooms	Statewide	Deliveries + Procedures	1.1	112.97											
	DIA	Dialysis	Statewide	Procedures	1.5	98.23											
	EDG	Electrodiagnosis	Category	Procedures	1.1		4.84	5.00	5.14	4.73	4.69		5.35				
	LAB	Laboratory	Category	Admissions*	1.1		66.63	60.54	48.91	49.00	52.58	34.82	56.35				
	ORR	Operating & Recovery Room	Category	O.R. Hours + 0.241 x Operations	1.1		54.71	50.08	54.03	45.62	49.25						
	PHM	Pharmacy	Statewide	Patient Days + 3.74 Admissions	1.1	2.92											
	PHT	Physical Therapy	Statewide	Treatments	1.5	5.16											
	RAD	Diagnostic Radiology	Category	Admissions*	1.1		29.93	26.96	23.84	24.85	24.32	28.94	17.62				
	RSP	Respiratory Therapy	Statewide	Treatments	1.1	4.72											
	THR	Therapeutic Radiology	Statewide	Procedures	1.2	7.79											
	A&G	Administrative & General	Category	Patient Days	1.1		7.36	5.99	5.59	6.14	6.67	9.55	5.74				
	DTY	Dietary	Statewide	ACU + SAC Days, net of "In-Out Same Day"	1.1	9.10											
	FIS	Fiscal	Statewide	Admissions	1.1	48.35											
	HKP	Housekeeping	Character	Square Feet	1.1									2.11	2.20	2.23	2.29
	L&L	Laundry & Linen	Character	Patient Days	1.1									2.72	2.18	2.16	1.89
	MRD	Medical Records	Category	Admissions	1.1		1.56	1.59	1.65	1.43	2.03	.46	1.48				
	NAD	Nursing Administration	Statewide	Patient Days	1.5	2.16											
	PLT	Plant	Character	Square Feet	1.1									1.36	1.65	1.58	1.56
	OGS	Other General Services	Statewide	Patient Days	1.5	1.40											
B	ANS	Anesthesiology	Statewide	Operating Room Hours	1.5	9.09											
	DIA	Dialysis	Statewide	Procedures	1.5	6.13											
	EDG	Electrodiagnosis	Category	Procedures	1.1		3.40	5.80	5.63	6.25	5.72		6.23				
	LAB	Laboratory	Category	Admissions*	1.1		11.87	14.94	11.40	11.52	12.40	5.33	10.08				
	PHT	Physical Therapy	Statewide	Treatments	1.5	1.12											
	RAD	Diagnostic Radiology	Category	Admissions*	1.1		16.30	17.05	14.06	15.86	16.85	13.33	15.01				
	RSP	Respiratory Therapy	Statewide	Treatments	1.1	.34											
	THR	Therapeutic Radiology	Statewide	Procedures	1.2	6.09											
	EMR	Emergency Room (CIP)	Character	EMR Admissions	1.1									.85	1.09	1.14	1.07

*Rankings will also be prepared on COST/RVU to assist in evaluating intensity increases

**IC = Inner City; U = Urban; S = Suburban; R = Rural

New Jersey State Department of Health 1976 Rate Setting

STATISTICAL AND CONTROL DATA

January 1976

CCMED-Median Cost/Admission For Intensity Factor	Teaching T	Teaching O	Acute L	Acute G	Acute U	Rehab. R	Special S
CCS Central Sterile Supply	71.22	63.66	62.42	60.13	60.64	232.26	146.11
DIA Dialysis	3.82	3.87	7.72	4.51			
EDG Electrodiagnosis	8.82	11.81	10.63	12.77	11.63		
LAB Laboratory	76.11	75.69	61.62	63.18	62.93	36.82	64.08
PHM Pharmacy	34.35	43.74	32.84	35.36	36.81	126.32	51.12
PHT Physical Therapy	4.55	6.18	5.60	3.97	3.28	470.51	30.74
RAD Radiology	43.50	40.20	37.24	36.26	33.85	39.50	33.92
RSP Respiratory Therapy	13.18	12.88	13.02	13.65	14.96	3.19	3.82
THR Therapeutic Radiology	1.07	.58	.37	.76			

Equalized Physician Compensation-Challenge Limit	Teaching T	Teaching O	Acute L	Acute G	Acute U	Rehab. R	Special S
EDR Education & Research	52,152	53,608	29,100	39,650	21,476		45,014
PHY Physicians	53,239	53,530	50,720	42,172	42,698	59,404	56,526
RSD Residents	16,323	14,912	14,912	17,855	19,837		19,182

Geographic Compensation Indices	North	Metro	Rural
Non-Physician			
Administrative & Clerical	.9618	1.0393	1.1111
Nursing & Technical	.9733	1.0129	1.0682
General Services	.9607	1.0100	1.1213
Physicians			
Physicians	1.0366	1.0627	.8361
Education and Research	1.0560	1.0004	.7543
Residents	.9760	1.0412	.9771

	1975	1976
Standard Meal Price	1.50	1.60

Cluster Medians	Units	State wide	T	O	L	G	U	R	S
General Services	Patient Days	35.94							
Inpatient Care	Patient Days	30.34							
	Admissions	247.28							
Ancillary Services	Admissions		273.43	238.75	234.06	233.48	234.16	315.55	197.19

Cluster Limits	Units	State wide	T	O	L	G	U	R	S
General Services	Patient Days	39.53							
Inpatient Care	Patient Days	33.37							
	Admissions	272.00							
Ancillary Services	Admissions		300.77	262.63	257.47	256.83	257.58	347.11	216.91

	I	R	S	U
Emergency Room Full Cost Per Visit (Median)	33.92	41.75	38.64	36.94
Emergency Room Cash Receipts Per Visit	16.09	21.79	20.72	19.52

	Non-Physician	Physician
Median Cost Per RVU Laboratory	.24	.07
Median Cost Per RVU Radiology	1.46	.95

	Factor
Economic Factor Bureau of Labor Statistics	1.065

APPENDIX B

PERSONS WHO PROVIDED INFORMATION USED IN THIS CASE STUDY

Mr. James Auriemma
New Jersey Blue Cross

Mr. Michael Bruinooge
Staff member
Legislative Service Agency
New Jersey State Legislature

Mr. Charles Buttaci, Director
Review and Comment Program
New Jersey Department of Health

Mr. Domenick J. Camisi
Vice President & Director,
Financial Management
New Jersey Hospital Association

Mr. Al Evanoff
Local Union 1199
Newark, New Jersey

Mr. Dan Fowler
Health Economics Services
New Jersey Department of Health

Mr. Chaim S. Gold
Divsion of Medical Assistance
and Health Services
New Jersey Deptartment of
Institutions and Agencies

Mr. Charles Henning
Henning & Associates

Mr. James Houston
Division of Medical Assistance
and Health Services
New Jersey Department of
Institutions and Agencies

Mr. James Hub, Director
Health Economics Services
New Jersey Department of Health

Michael Kalison, Esq.
Associate Project Manager
Health Economics Services
New Jersey Department of Health

Mr. Frederick Koehler
New Jersey Blue Cross

Naomi LaBastille, Esq.
Special Assistant to the Commissioner
New Jersey Department of of Insurance

Mr. Jeffrey Laurenti
Executive Director, Senate Majority
New Jersey State Senate

Mr. Gus Lembo
Deputy Director
Division of Consumer Affairs

Mr. Jack Owen
President
New Jersey Hospital Association

Mr. Kenneth Paisley
Director of Planning
New Jersey Department of Health

Mr. Edward Perron
New Jersey Blue Cross

Dr. John Reiss
Assistant Commissioner for Health
Planning and Resources Development
New Jersey Department of Health

Mr. Thomas Russo, Director
Division of Medical Assistance and
Health Services
New Jersey Department of Institutions
and Agencies

Mr. Joseph Slavin
Executive Director
Regional Health Planning Council, Inc.

Mr. Joseph Walsh
New Jersey Blue Cross

Mr. David Wagner
Deputy Commissioner
New Jersey Department of Health

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Health Care Financing Administration
Leonard D. Schaeffer, **Administrator**

Office of Research, Demonstrations, and Statistics
James M. Kaple, **Acting Director**

Diane Bolay, **Director, Program Planning and Support**

Karen Pelham O'Steen, **Research Publications Coordinator**
Cynthia Dingle, **Editorial Assistant**

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